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HISTORY OF INDIAN MEDICINE

Containing Notices, Biographical and Bibliographical, of the
Āyurvedic Physicians and their Works on Medicine

From the Earliest Ages to the Present Time

By

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With a Foreward
by
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Griffith Prize Essay for 1911

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To
The Memory
of
My Mother

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FOREWORD

An adequate history of Indian Medicine has yet to be written, though the importance of the subject has been acknowledged by eminent authorities. Professor Max Neuburger of the University of Vienna records the opinion that "the medicine of the Indians, if it does not equal the best achievements of their race, at least nearly approaches them, and owing to its wealth of knowledge, depth of speculation and systematic construction, takes an outstanding position in the history of oriental medicine. Thanks to the inexhaustible fount of Sanskrit Literature, its development can be traced in outline at any rate from its primeval origins in empiricisms and theurgy to its height as a completed system of learning." (Neuburger: History of Medicine, translated by Playfair, Vol. I, p. 43.) It needs no elaborate argument to establish that this "inexhaustible fount" requires for its complete exploration an army of scholars; and till this has been achieved, summaries of the history of Indian Medicine must continue to be incomplete and fragmentary. We cannot consequently express surprise

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when we find that Neuburger in his great work devotes only 18 pages to the subject, while Professor Buck of Columbia in his work on "the Growth of Medicine from the earliest times to the end of the 18th century" contents himself with a few paragraphs which occupy 8 pages only. In these circumstances, it is no wonder that the topic is not even mentioned in the brilliant lectures on "the Evolution of Modern Medicine" delivered by Sir William Osler at the Yale University in 1913.

I have stated enough to establish the importance of the work undertaken by Dr. Girindranath Mookerjee. In 1909 the University awarded him the Griffith Memorial Prize for the encouragement of advanced study in Science and Letters, on his valuable thesis dealing with the Surgical Instruments of the Hindus. This work has already been published in two volumes and its merits have been widely recognised. In 1911 the University again awarded the Griffith Prize to Dr. Mookerjee for his exhaustive thesis entitled "Notices, Biographical and bibliographical of the Indian Physicians and their works on Medicine." This was followed in 1913 by a thesis on "the Science of Medicine in the Atharva Veda," which participated in the award for that year. The materials thus collected are of immense value and will occupy several volumes. The financial difficulties

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of the University have led to an unfortunate delay in the publication of the work and it is a matter for congratulation that the first volume will now be in the hands of scholars. The subsequent volumes are in the press and will be issued as rapidly as circumstances permit.

ASUTOSH MOOKERJEE.

The 28th February, 1923.

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PREFACE

The first volume of the History of Indian Medicine is now offered to the public. It is now many years since I undertook and completed the book. I submitted it as a thesis for the Griffith Prize for original research : "Notices Biographical and Bibliographical of the Âyurvedic Physicians and their Works on Medicine." It was commended and the prize was awarded in 1911. I regret that so long a time has elapsed in the publication of the book. During the last few years there have been advances in the study of history of medicine. Consequently in this edition, not only has the revision been exhaustive, but many portions have been entirely recast and largely re-written. While this volume represents data and conclusions drawn from individual research, it is at the same time largely indebted to the works of others. References have been given to all the authorities and original sources as far as possible.

I may at once disclaim all pretensions to scientific treatment of my subject. I crave the indulgence of the readers for many shortcomings of the work. The writer is not master of his time, and the incessant engagements of his practice leave little leisure for literary works.

To render the finding of any particular subject easy to the reader, I have enlarged the table of contents. The general index, which will be given at the end of the work, will facilitate references.

Before concluding this preface, I tender my thanks to the Vice-Chancellor of the Calcutta University, Sir Asutosh Mookerjee, for assistance of the utmost value in the preparation and publication of this volume. In fact, it might have been deferred much longer if I had not secured his valuable assistance. I have also to express my gratitude to him for his kindness in writing a foreward to this volume.

156, Haris Mukerjee Road,
Bhowanipur, Calcutta.
1st March, 1923.

G. N. MUKERJEE

As regards the transliteration of Sanskrit words, we have employed the method adopted in the Congress of Orientalists and circulated in the Journal of the Royal Asiatic Society, ignoring in fact, the unpleasant characters of the Sacred Books of the East.

I

SANSKRIT AND ALLIED ALPHABETS.

अ	*a*	ओ	*o*	ट	*ṭ*	ब	*b*
आ	*ā*	औ	*au*	ठ	*ṭh*	भ	*bh*
इ	*i*	क	*k*	ड	*ḍ*	म	*m*
ई	*ī*	ख	*kh*	ढ	*ḍh*	य	*y*
उ	*u*	ग	*g*	ण	*ṇ*	र	*r*
ऊ	*ū*	घ	*gh*	त	*t*	ल	*l*
ऋ	*ṛ*	ङ	*ṅ*	थ	*th*	व	*v*
ॠ	*ṝ*	च	*c*	द	*d*	श	*ś*
ऌ	*ḷ*	छ	*ch*	ध	*dh*	ष	*ṣ*
ॡ	*ḹ*	ज	*j*	न	*n*	स	*s*
ए	*e*	झ	*jh*	प	*p*	ह	*h*
ऐ	*ai*	ञ	*ñ*	फ	*ph*	ळ	*ḷ*

ं (*Anusvāra*)	*ṁ*	ऽ (*Avagraha*)	’
ँ (*Anunāsika*)	*m̐*	(*Udātta*)	´
: (*Visarga*)	*ḥ*	*Svarita*	ˆ
× (*Jihvāmūlīya*)	*ẖ*	*Anudātta*	ˎ
⌓ (*Upadhmānīya*)	*ḫ*		

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INTRODUCTION

INTRODUCTION

Weber, in his History of Indian Literature,[1] remarks: "The number of medical works and authors (in Sanskrit literature) is extraordinarily large. The former are either systems embracing the whole domain of science, or highly special investigations of single topics, or lastly, vast compilations prepared in modern times under the patronage of kings and princes. The sum of knowledge embodied in their contents appears really to be most respectable. Many of the statements on dietetics and on the origin and diagnosis of diseases bespeak a very keen observation. In Surgery, too, the Indians seem to have attained a special proficiency and in this department European surgeons might perhaps even at the present day still learn something from them, as indeed they have already borrowed from them the operation of rhinoplasty. The information, again, regarding the medicinal properties of minerals (especially precious stones and metals), of plants, and animal substances, and the chemical analysis and decomposition of these, covers certainly much that is valuable. Indeed, the branch of Materia Medica generally appears to be handled with great predilection, and this makes up to us in some measure at least for the absence of investigations in the field of natural science. On the diseases etc. of horses and elephants also there exist very special monographs." Dutt says:[2] "The number of Sanskrit medical works, and especially of small compilations on the treatment of diseases, is too numerous and indefinite to admit of detailed enumeration here. The enquirer after them is sure to find, in different parts of the country or seats of learning, many little manuals, essays and digests of which he did not hear before. It would seem that in the absence of printing, teachers of medicine used to prepare small compilations containing such prescriptions as they were in the habit of using, for the guidance of their pupils, who copied them for personal use." When writing on medical authors and their works in my thesis "The Surgical Instruments of the Hindus,"[1] we noted that, besides the principal authors and original works mentioned therein, "the number of Sanskrit medical works is simply legion; many of them are daubed with fancy names and are excellent treatises on the different branches of medical science. I intend to publish in a separate volume short notices of the medical authors and their works and so we need not dwell on them here." The desire which I have long entertained of contributing to the History of Indian Medicine has now been realised, and the present attempt is to fulfil the promise made a few years before.

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[1] Pp. 269-70.

[2] Materia Medica of the Hindus, Preface, p. vii.

In performing this duty I have endeavoured to embody my researches in a connected form, but I have not been inattentive to the works of other enquirers. It would be, no doubt, interesting to take a brief survey of the work done by scholars as regards our knowledge of Āyurvedic authors and their works. Prof. Wilson[2] wrote on the early medical authors. Royle[3] proved the originality of the Hindu medicine. His arguments for antiquity of Hindu Medicine are deservedly styled as epoch-making researches. Dietz has given in his Analecta Medica a long abstract from Ibn Osaibe's biographical work, on the Lives of Indian Physicians. In Ainslie's Materia Medica, some of the medical treatises are mentioned. In Wise's Commentary[1] we find a list of the Hindu writers on medicine and their works. In Weber's History of Indian Literature, we have a few pages on the medical texts of the Hindus. Cordier's Recentes Decouvertes, Vāgbhaṭa and other contributions supply many informations on the subject. Dutt in the preface to his Materia Medica of the Hindus described some of the important works, and similarly we find them described by the Thacore Saheb,[2] in his History of Aryan Medical Science, with an important bibliography at the end. Roth's monograph on Caraka and the notices of medical authors in St. Petersburg Dictionary[3] supply us with important details. A more systematic description of the authors and their works, we find in Jolly's Medicine in the Encyclopædia of Indo-Aryan Research (Grdr.). Hoernle's contributions "The Commentators of the Śusruta Saṁhitā,"[9] and "The Ancient Medical Authors" in his Osteology, and his magnificent edition of the Bower MS., are invaluable aids to our study. The notices of the authors in Ray's History of Hindu Chemistry,[4] and the preface in Kunte's Vāgbhaṭa are repositories of useful informations on the ancient medical literature. In the Vanauṣadhi Darpaṇa, Kavirāja Virajācaraṇa Gupta, gives us an elaborate list of Āyurvedic books in Bengali, the important works being described in detail. I have also availed myself of his contributions in his Account of the Principal works of the Atreya School of Medicine. Many MSS. are noticed in the catalogues of Sanskrit works; and I have derived special help from L. I. O. Cat., Nepal Cat., Bik. MSS., Oxf. Cat., Cat. Cat., G. O. M. L. Cat., etc., as these contain descriptions of various MSS.; and I take this opportunity of acknowledging my indebtedness to Mitra, Śāstri, Bhāndārkar, Aufrecht and others. It is more than probable that I may have failed to refer to some contributions which ought to have been mentioned, but I am confident that my sins of omission have not been numerous. It has been my earnest desire to omit nothing of importance. A sufficient acknowledgment of the source of the literature that has been laid under contribution will be found in the index of the authors quoted.

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[1] Vol I, Introduction, p. 33.

[2] Oriental Magazine, Calcutta, February and March, 1823.

[3] Royle: An Essay on the Antiquity of Hindoo Medicine, 1837.

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[1] Wise: Commentary on the Hindu System of Medicine, 1845.

[2] Chapter II: Ancient Writers on Hindoo Medicine.

[3] Supplement Vol. vii—Medical Authors.

[4] J. R. A. S. 1907.

The European scholars had a preconceived notion that the ancient Sanskrit medical books contained little or nothing that was original. Thus we find that though the other branches of Sanskrit learning were vigorously ransacked by their critical judgment, the Hindu science of medicine received little or no attention. Dutt says[1] "The Hindu medical science unfortunately received less attention from the earlier antiquarians than the other Indian Sciences, and the facts collected even up to the present date are not nearly exhaustive." Even Sir William Jones, a savant with whom it would be impossible to name any other in the same breath in oriental scholarship, did not think it worth while to examine the Sanskrit medical books critically. He says: "What their old books contain on this subject, we ought certainly to discover, and that without loss of time; lest the venerable but abstruse language, in which

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[1] Civilisation in Ancient India, Vol. II, Ch IX.

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they are composed, should cease to be perfectly intelligible, even to the best educated natives, through a want of powerful invitation to study it. Bernier, who was himself of the Faculty, mentions approved medical books in Sanskrit, and cites a few aphorisms, which appear judicious and rational; but we can expect nothing so important from the works of Hindu and Muselman physicians, as the knowledge, which experience must have given them, of simple medicines."[1] Later on he complains: "I have no evidence, that, in any language of Asia, there exists one original treatise on medicine considered as a science: physick, indeed, appears in these regions to have been from time immemorial, as we see it practised at this day by Hindus and Muselmans, a mere empirical history of diseases and remedies; useful, I admit, in a high degree, and worthy of attentive examination...... We still have access to a number of Sanskrit books on the old Indian practice of physick, from which, if the Hindus had a theoretical system, we might easily collect it." He concludes: "On the whole, we cannot expect to acquire many valuable truths from an examination of eastern books on the science of medicine; but examine them we must, if we wish to complete the history of universal philosophy, and to supply the scholars of Europe, with authentic materials for an account of the opinions anciently formed on this land by the philosophers of Asia."[2] Even now, after an interval of a century, similar remarks are made by learned men. Willoughby[3] in his History of Medicine, writes: "It would be useless, were it possible, to discuss in this place the medicine of India and China, which has no

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[1] The works of Sir William Jones, London, 1799, Vol. I, p. 12.

[2] *Ibid*, Vol. I, pp. 161-62.

[3] Encyclopædia Medica, Vol. 7.

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direct interest to us." This need cause no surprise, for the majority of medical men practising in India are ignorant of Sanskrit language in which the ancient medical books are written and the exigencies of a lucrative practice have left them without inclination for the requisite study. But it must be acknowledged that it is not impossible for a surgeon or physician to become an active contributor to the literature of the profession. The renowned Adams was only a village surgeon. The scholars, on the other hand, having no knowledge of medicine, may have been prevented by lack of the necessary materials from carrying out adequate researches. Thus we find that even modern scholars are not unanimous as regards the remote origin of the science. Whitney[1] says: "The medical science, although its beginnings go back even to the Veda, in the use of medicinal plants with accompanying incantations, is of little account, and its proper literature by no means ancient."

The study of the ancient books is very important in the construction of the history of Hindu medicine. "The history of medical literature forms a very large part of medical history. If we open a standard history of medicine, it may seem in some parts as if it were little else than a history of books. One feels that this is not quite just, as books contain but a small part of medical activity through all the ages. The author of a medical book is not necessarily a fair representative of his class. He may have been superior to the average. On the other hand, the mere fact that what he wrote has survived does not show him to have been a greater physician than others of his contemporaries who wrote nothing, or whose works are lost. Nevertheless since books are in the end more

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[1] Introduction to Whitney's Sanskrit Grammar, page xxii.

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enduring than wrought metal or sculptured stone, medical writings are sometimes the only evidence we have of the state of medicine during long tracts of time."[1] It is only from a diligent research into the Sanskrit books that we can expect to become acquainted with the medical science and learning of the ancient Hindus.

The Sanskrit medical books still exist in manuscripts which lie scattered here and there. Only a few important books have been edited and published; and there are numerous compositions, either treating of the whole system or of separate topics, that bear a character of more or less weight. One or two books only have been translated in English in recent times. So practically these works are still sealed books to the world, and the historians of medicine make no room for the study of Indian medicine in their works. Royle says:[7] "Considerable as appears to have been Hindoo medicine and extensive as no doubt has been the influence of its Materia Medica, the absence of all of the former in the annals of medicine, can only be accounted for from the geographical position of India with respect to Europe, and the total unacquaintance with the refined language of the former, which prevailed in the latter even to our own day. For when the name of even the most celebrated Hindoo writer presented itself before a modern author writing expressly on the subject, it is passed over without comment or examination—"Scharak Indus, a Rhazeo citatus plane ignotus" (Sprengel. Hist. Rei. Herb. 1. p. 234.) That a Hindoo system of medicine does exist, we know from their numerous books on all branches of that science; that some of these were written prior to the Arabs, we have shewn by their being quoted in the works of the latter. How much earlier than the

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[1] Payne: English Medicine in the Anglo-Saxon Times, p. 10.

[6] Royle: Antiquity of Hindoo Medicine, pp. 74-75.

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eighth century the principal of them were composed, we may only hope to ascertain by the progress now making in settling Indian Chronology. But in absence of this it is practicable, as I have stated, to get a conviction of the cultivation of medicine among the Hindoos at still earlier periods, from occasional notices by writers of the West; and we cannot but allow them an early knowledge of the properties of many of the valuable drugs which their country afforded them, when we see the necessarily subsequent employment of the same by the Greeks and Romans." It is unfortunate that even the names of Sanskrit authors and their works are generally unknown to scholars. To supply this want I have collected the notices of the authors and their works from various sources, of which it is impossible to detail a list. The ages in which they lived are shrouded in obscurity and mystery, and nothing like a chronological arrangement was ever attempted. Their birth-place, parentage, or education have eluded research, and little is known of the time of their birth. We learn little concerning many eminent physicians except that they are quoted occasionally in text books, commentaries, annotations, and glosses. Of the incidents of their personal lives we have no record. Where they lived and practised are all unknown to us. The chronological relations of the authors, which I have attempted in this work, must not be taken as settled facts in the history of literature; they are only land marks in vast unexplored area, which may be of some help to travellers on these lines. The present work can lay no claim to finality, the chronology must for the present be found somewhat tentative. It is a brief survey over the whole field which begins with the early dawn of Hindu civilisation, the age of the Ṛgveda to the present time. The arrangement of the authors might in some

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places seem arbitrary, but on close inspection it would be found that it was the only alternative left to the writer from the references to authors quoted in books, in the absence of any authentic account of their lives.

In the history of medical science every chapter might have as its heading the name of a great surgeon or physician, who as pioneer has determined and guided progress. We have adopted this plan in the present contribution. The design of the work is expressed in its title. The need for it, as a contribution towards a history of medicine, is proved by the fact that no work professing to cover the whole field of medical bibliography of Āyurveda has hitherto appeared in any language. How far I have succeeded in filling up the blank that exists in this department of medicine must be left to the judgment of the readers. I felt that it would be rendering useful service to scholars engaged in this field of research, if I could bring together the latest and the most complete information, which is diffusely recorded in the transactions of learned societies, in journals, in monographs and in systematic treatises, in a form which would allow of ready and easy reference.

Again as an index of the Sanskrit medical works it would be invaluable to scholars in identifying the recently discovered MSS. of Indian medicine in different parts of the country. I am confident that MSS. of Sanskrit medical literature are still extant in different places in India and no time should be lost in organising a regular search for the Āyurvedic MSS. "The climate, and the materials of which these ancient works are composed, render them very liable to be destroyed. Some are already lost, and the difficulty of procuring correct copies of the remainder, is yearly increasing." (Wise.)

I now hand over my work to the learned public. I am fully cognizant of the very defective manner in which I

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have treated the subject and conscious of the numerous imperfections and drawbacks which are plentifully abundant in its pages. I must however express a hope that, inspite of the many lacunæ and faults which cannot pass unheeded, it may induce others more capable of elucidating such a complex subject to devote their researches and investigations to it.

In the continent of Europe, the study of history of medicine had been continued with some zeal from the earliest times. In France, medical history has always a chair of its own at the Université; at Vienna, the practice seems to have been the same. The Germans cultivated this branch of medical science in the eighteenth century; and it used to be called a peculiarly German department of science. Even in ancient times, the study of history of medicine was not neglected. In the Hippocratic Collection, we have a treatise on "Ancient Medicine." Celsus's great work "De Medicina" is of the highest value as a history of medicine from the time of Hippocrates to his own days.

The first complete history of medicine was written by Sprengel. His "History of Medicine" appeared in successive editions in German and in a French translation from 1792 to 1828. There is no English translation of this important work. The book is now nearly out of date. Hecker's two works, published in 1822 and 1839, belong to a bygone age. So is Le Clerc's "Historie de la médecine," Genéva, 1696, 8vo. Amast, 1723, 4to, which only continues the history till the age of Galen.

The most complete works and the best, because contemplating the history of medicine from the standpoint of modern science, are:—Haeser: Lehrbuch der Geschichte der medicin und der epidemischen Krankheiten. Jena, 3rd ed. 1875-79.—Daremberg: Histoire des Sciences médicales, Paris, 1870.—Puccinotti: "Storia della medicina."—Bouchut: Histoire de la médicina et des doctrines médicales, Paris, 1872-3; it compares the ancient and modern schools of medicine.

For special periods, we have:—Wüstenfeld: Geschichte der Arabischen Aertzte und Naturförscher, Göttingen, 1840.—Lucien Le Clerc: Histoire de la médicine Arabe. Paris, 1876.—Daremberg: L'Ecole de Salerne. Paris, 1861.—De Renzi: Storia documentata della Scuolla medica di Salerno, 2nd Ed. Naples, 1857.—Collectio Salernitana, 5 vols. Naples, 1852.—Hirschel: Geschichte der Brown' schen Systems und der Erregungs Theorie. Leipzig, 1846.

"The historical investigation, like the geographical, had from the outset a dual character, in as much as it adopted either the chronological standpoint or the pathological" (Hirsch). Among the best known works belonging to the chronological class are:

Noah Webster: Brief History of Epidemic and Pestilential Diseases, 2 Vols., Engl. Ed., 1800.

Bascomb: A History of Epidemic Pestilences, from the Earliest Ages.

Schnurrer: Chronic der Seuchen. 2 Vols., Tübingen, 1823.

Villalba: Epidemiologia Española.

Ilmoni: Bidrag till Nordens Sjukdoms Historia.

On the Pathological side, we have:

Hensler: Vom abendländischen Aussatze, Hamburg, 1790, and Geschichte der Lustseuche. Altona, 1783.

Ozanam: Histoire médicale génér. et particul. des maladies épidémiques. 4 Vols., Paris, 1835.

Hecker: Ueber die Justinianeische Pest. Der Schwarze Tod in 14 Jahrhundert, Engl. transl. by Babington, Lond. 1833. Die Tanzwuth, Berlin, 1832. Der englische Schweiss, Berlin, 1834. Die epidemischen Krankheiten der Jahre 1770-72.

Haeser : Lehrbuch der Geschichte der Medicin und der epidemischen Krankheiten, 1880-82.

Atlas Historique et Bibliographique de la Medicine composé de Tableux sur l'Histoire d'Anatomie, de Physiologie, de l'Hygiene, de la Medicine, de la Chirurgie et de l'Obstetrique, etc., Paris, 1829.

There are also important works which treat of the doctrinal aspect of medicine :

Broussais : Examen des Doctrines Médicales et des Systemès Modernes de Nosologie, Paris, 1816.

Daremberg : La Medicine, Histoire et Doctrines, Paris, 1865.

Hirschel : Geschichte der Medicin. Wien, 1862.

Renouard : History of Medicine. Transl. by Comegys, London, 1856.

Portal : Hist de l'Anat. et de la Chirurg.

Ploucquet : Literatura Medica Digesta : It is a storehouse of references on medical subjects.

Briot : Histoire de l'Etat et des Progrés de la Chirurgie Militaire en France, 1817.

Mollet : La Médecine chez les Grecs avant Hippocrates, 1906.

Willis : Pharmaceutice Rationalis. Geneva, 1876-77.

But this spirit of historical research gradually declined even in the continent of Europe. "In France, Daremberg, Lorain, Maurice Raynaud seem to have left no successors; and in Germany, where one might have looked for better things, the history of medicine has fallen out of the programme of University studies. Yet it is not so long ago that every German University had a special lecturer on the subject, but, as the chairs fell vacant, they have been

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left unfilled, till now there is but one professor of the history of medicine in the Fatherland, in the person of Dr. A. Hirsch, of Berlin."[1] In recent years an attempt has been made to revive the study in Germany; and we find many useful works published within the last fifteen years.

As regards systematic treatises only a few important works dealing with the subject have recently been published. Gurlt's 'Geschichte der Chirurgie' is a monumental contribution to the history of medicine. Pagel's works: Historisch Medicineschen Bibliographe for die Jahre 1875-1896 and Einführung in die Geschichte der Medicine, appeared in 1898. An encyclopædic work on the subject, as designed by Puschmann, namely, The Handbuch der Geschichte der Medizin, was successfully edited by Professors Neuberger and Pagel (1902-5). We have before us Neuberger's Geschichte der Medizin, in an English garb, Vol. I. By Playfair, London, 1910. This volume narrates the story of the growth of the medical science to the Renaissance. The second volume of Neuberger's 'History of Medicine' is divided into two parts, of which the first deals with the progress of the science during the time between the death of Galen and the end of the fifteenth century. The concluding instalment is expected to appear shortly.

Under the auspices of the Imperial Academy, Berlin, and under the direction of Prof. Diehl, scholars have collated the important MSS. of Greek texts in the libraries of Europe; and we expect soon a new text of the Greek writers on medicine, published by Trubner & Co. "A topographical list has been issued with reference to all the sources of our knowledge of Hippocrates and later Greek

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[1] B. M. J., 1880, Vol. II, p. 672.

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writers. An Institute for the study of history of medicine has been founded at the University of Leipzig as a memorial to the distinguished scholar Prof. Puschmann. Under the direction of Prof. Sudhoff the Institute will undertake an entirely new edition of the Latin authors." The French school of medical historians has rendered eminent services, and medical history has for many generations received encouragement from the Universities in France. But Germany has outstripped all nations, and "the output of works and monographs, representing scholarship of the first class, is equal to the rest of the world put together" (Osler). One must look to Germany when one wishes for information regarding the history of medical science.

A very important systemic study of drugs profusely illustrated by reproductions of photographs showing particularly the methods whereby they are produced and brought to our markets, by Professor Tschirch of Berne, is now in course of publication by Tauchnitz of Leipzig.

Under the instruction of the Italian Government, Dr. Luigi Sambon of Rome commenced his work on the History of Medicine in 1895 for presentation at the next meeting of the International Medical Congress. His curious collections of "donaria" or votive offerings of ancient Italy and surgical instruments taken from the ruins of Pompeii and Herculaneum throw considerable light on the history of the healing art.

Kostomiris published an interesting treatise on Ophthalmology and Otology among the ancient Greeks in 1887. The medical faculty of Athens and the senate of the University took up the project of printing the pseudo-Hippocratean treatises which were not published before, as well as treatises of Kratenas, Galen and Promotus.

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The authorities of the Philadelphia College of Physicians have officially recognised the subject of the history of medicine for which a special section has been formed in 1905.

In Europe, the study of the history of epidemic diseases has been pursued with an earnestness, and the medical men in England contributed their quota. We now possess some good histories of epidemic and pestilential diseases :

James Moore : History and Practice of Vaccination, 1817; History of the Small Pox, London, 1802.

A History of Epidemics in Britain from A. D. 664 to the extinction of Plague. By Dr. C. Creighton, M.A., M.D., 1891.

Hirsch : Handbook of Historical and Geographical Pathology, 1860, English translation by Creighton, New Syd. Soc. 1883. Geschicte der Ophthalmologie, Handbuch der gesamten Augenheilkunde von Graefe und Saemisch, Bd. vii, s. 293.

Herschberg : Aegypton, Geschictliche studien eines Augenarzles, Leipzig, 1890.

F. Buret : Syphilis in Ancient and Pre-historic times, translated by Dr. Ohmann—Dumesnil, 1891. F. A. Davis, London.

Fayrer : The Natural History and Epidemiology of Cholera, 1888.

Macpherson : Annals of Cholera from the Earliest Period to year 1817, 1870.

Macnamara : History of Asiatic Cholera, 1876.

Bryden : Cholera in the Bengal Presidency from 1817 to 1872.

Bellend : History of Cholera in India.

Epidemics of the Middle Ages, Translated by Babbington for Syd. Soc., 8vo, London, 1844.

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Stephenson, Sydney: Epidemic Ophthalmia, 1895.

Gasquets: History of the Great Pestilence.

Hanser: Le cholera en Europe depuis son origine jusqua nos Jours. Paris, 1897.

Thompson (John): Historical Sketch of Small Pox, 1822.

George: History of Small Pox, 1833.

Thompson: Annals of Influenza, from 1510-1890 in Great Britain, Syd. Soc.

Hodges: A Historical Account of the Plague in London in 1665, London, 1721.

America has contributed the Index Medicus, and a work entitled Physicians and Surgeons of America has been published at Concord, U. S. A. It contains biographical accounts, with portraits, of more than 1,200 representative Physicians and Surgeons of U. S. A., Mexico and Canada, in 1896. The other American publications are :—

Smart: The medical and Surgical History of the war of the Rebellion, 1888.

Jonathan Wright: Medical History of Laryngology and Rhinology.

John Mackenzei (Baltimore): Historical and Literary Researches on Laryngology.

To supply a bibliography of current Spanish medical literature, of which, comparatively little has hitherto been known to the learned men of the world, the Index Medicus Hispanus began to appear in 1904, under the auspices of the Colegés de Medicos of Gerona.

In England, on the other hand, the study of the history of medicine has never been a favourite subject with scholars. "It is not creditable to a country which had laid the healing art under such deep obligations, and which annually sends forth the flower of her youth to its study or its practice, that her only history of medicine which learned Europe deigns to notice is that written by Dr. John Freind early in the last century. Not till our universities adopt the custom of their continental sisters, and add a chair of the history of medicine to their teaching strength, will they enjoy the adequate conditions under which they may do posthumous justice to their great practitioners and consultants, instead of leaving the task to the alien and sometimes uncongenial hands of a Haeser, a Daremberg, or a Puccinotti.[1] Dr. Payne remarks: "We must confess, with some shame, that our own country has been, and is behind most other civilised nations in the bulk and value of its contributions to the history of medicine. Germany, France and Italy have produced, on the subject, brilliant and profound works, which remain our standard authorities. The smaller countries such as Holland and Switzerland have not been behind hand; while our cousins across the Atlantic are now displaying characteristic energy and zeal in the study of medical antiquities. They have indeed already produced, in the *Surgeon General's Catalogue* of Dr. Billings,[2] by far the most complete bibliography of medicine, and probably the best bibliography of any large branch of science, ever compiled in any age or country.

When we consider the interest shown, and the positive results achieved in medical history, by the medical profession in all these countries, we must admit that our own countrymen have displayed, in comparison, lamentable apathy and but little industry."[3]

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[1] Lancet, 1890, Vol. II, p. 85.

[2] Index Catalogue of the Library of the Surgeon-General's Office, United Sates Army. 1887—1897.

[3] Fitz-Patrick Lectures, 1903, p. 4.

In the Editor's Preface to the first edition of Vol. I of Paulus Ægineta, Adams remarks: "Notwithstanding the additions which have been made of late years to the history of medical literature, it must still be admitted that there is not, in the English language, any work which contains a full and accurate account of the theoretical and practical knowledge possessed by the Greeks, Romans, and Arabians, on matters connected with medicine and surgery. Nor, as far as I can learn, is the case very different with the continental languages. For, although the German and French have lately acquired several histories of medicine distinguished for their ability and research, the object of these works would appear to be confined to a general exposition of the leading discoveries and revolutions in doctrine which marked each particular age or epoch in the profession; and I will venture to affirm that no person will be able to acquire from a perusal of them anything like a competent acquaintance with the minute details of ancient practice."

There is no doubt that the English people did not appreciate the importance of historical research in the department of medicine. But the history of medicine as a subject had not been wholly neglected in England. Bartlot and Caius were learned in it. Sir Hans Sloane (1719-1735), "made collections of materials for medical history which begin with twelfth-century MSS. of Hippocrates and Galen and extend to the letters of the physicians of his own time."[1] His famous MSS., 3000 in number, in the British Museum contain letters and notes by the eminent physicians of the country preceding his death, and they thus form the principal source of the medical history of England during the long period covered by the six reigns—Charles II to James II.

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[1] Moore : Medicine in the British Isles, 1905-6, p. 2.

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In medical biography, there are no doubt some good works in the English tongue. In 1640, Dr. Hamey wrote in Latin a biographical history of the medical men of his time from 1628, entitled Bustorum Aliquot Reliquiae, which was probably the origin of Dr. Munk's Roll of the College of Physicians, in three Volumes, 1518-1825, London, 1879.—Duns: Memoir of Sir James Simpson, Edinburg, 1873;—for the lives and works of British Physicians and Surgeons, the articles in the Dictionary of National Biography, Smith, Elder & Co: edited by Sidney Lee;—the faithful biographies of departed medical worthies in the Asclepiad, and the obituary notices in the various medical journals; —Masters of Medicine series by T. P. Unwin, London: Sydenham by Payne, Hunter by Paget, Harvey by Power, Simpson by Gordon, and Stokes by his son, are models of accurate and informing biography. There are also other standard medical biographies:

Sir James Y. Simpson: By Eyre Ballantyne Simpson, Famous Scots series.

Life of William Cullen: By John Thomson, Edin., 1859.

Biographical preface by Thomas Beddoes in "Elements of Medicine" by John Brown.

Ambrose Paré and his Times, 1570-1590: By Stephen Paget, 1897.

Kuhn: Medicorum Græcorum Opera quæ exstant. Lipsiæ, 1821—30. This work includes the works of Hippocrates, Aretæus, Discorides and Galen.

Joannes Rhodius (Dane): Life of Celsus subjoined to the 2nd Ed. of his work De Acia Dissertatio, ad cornelli Celsi mentem, qua simul universa Fibulæ ratio explicataur, Hafniæ, 1672, 4to.

Biographo universalle.

Aikin: The Life of Caius.

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Burton : The Life and Writings of Boerhaave, 2 vols. Lond., 1743.

Johnson : Life of Boerhaave, Lond., 1834.

W. Cullen Brown : Memoirs of John Brown, in his edition of Brown's works, 3 vols., 8vo, 1804.

Mathew Duncan : Life of William Hunter, in Edin., Med. Jour., June, 1870.

Drury Otley : Life of John Hunter, prefixed to Palmer's edition of the Works of John Hunter, 4 vols. 1835.

Baron : Life of Jenner, 1827.

Guthrie : The Medical History of J. Evelyn and his Time (1620-1706), 1905.

Dr. William Smellie and His Contemporaries : A contribution to the History of Midwifery in the 18th Century : By John Glaister, M. D., Glasgow. James Maclehose & Sons, 1894.

Life of Richard Owen : Written by his grandson and published by John Murray.

Life of Sir Henry Halford : By William Munk, M.D., Longmans & Co., 1895.

Life and Works of John Arbuthnot : By Geo. A. Aitken, Clarendon Press, 1892.

Epps : Life of John Walker, M.D., London, 1831.

Aveling : Biographical Sketches of British Obstetricians.

MacMichael and Munk : Lives of British Physicians. 1857.

Rolleston : Life of James Lind. Journ Royal Nav. Med. Service, Vol. I, 1915.

In the Oxford Editions,—Edited by Dr. Greenhill : Life of Sir James Stonhouse, Bart., M.D. Anecdota Sydenhamiana.

Life of Thomas Harrison Burder, M.D.

Life of George Cheyne, M.D.

Life of Charles Brandon Trye.

Walsh: Makers of Modern Medicine, 1909.

Old Time Makers of Medicine, 1911.

Fayrer: Sir Ranald Martin. London, 1907.

The Academic Gregories: By A. G. Stewart, Famous Scots Series, 1901. Pub. by Oliphant Anderson and Ferrier, Edin. and London.

For Greek and Roman Physicians, the reader is referred to the articles in Smith's (larger) Classical Dictionary on "Hippocrates," "Galen," "Celsus" and the rest, by Dr. Greenhill;—Sprengel: Sundry Distempers unknown to the Ancients, etc.;—Adams: Translation with introduction and commentary on the works of Hippocrates, Paulus Aegineta, and the Extant Works of Aetius, Syd. Soc. Ed.—The First Four Books of Celsus, Containing the Text, Ordo Verborum, and Translation: By Steggall, 1857 (Churchill).—'Harvey and Galen' by Payne, Harveian Oration 1896;—Quincey: Medicina Statica; being the Aphorisms of Sanctorius, 1728.

Regimen Sanitatis Salernitanum: Trans. by Sir A. Croke, Oxford, 1830.

Aristotle: On Youth and Old Age, Life and Death, and Respiration: By W. Ogle, M.A., M.D., Oxon, F R.C.P., London. Longman, Greene & Co., 1897.

Celsus: De Medicinâ—Milligan's translation, 1831.

As regards complete history which give a comprehensive review of the evolution of the art and science of medicine from its earliest beginning, we have:—

Freind: History of Physick from the Time of Galen to the Beginning of the 16th century, London, 1725-6. He begins with Oribasius and Aetius and ends with Linacre, the founder of the Royal College of Physicians of London,

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Russell : The History and Heroes of the Art of Medicine, London, 1861.

Wootton : Chronicles of Pharmacy, 2 vols. London, 1910.

A Historical Sketch of Surgery : Ancient, Mediæval and Modern. By B. A. Watson, A.M., M.D., Surgeon to Jeresy City and Christ Hospitals, reprinted from the New York Medical Journal, from August, 1890.

History of Medicine and the Medical Profession, by J. H. Bass : Translated by H. E. Handerson, M.A., M.D. New York. 1889.

Much information may be gathered from the historical retrospects prefixed to many chapters in Aitken's Science and Practice of Medicine, in Reynold's System, and in Pepper's system of medicine. In the recent edition of Albutt's System, History of Medicine by Albutt, and Medicine in Modern Europe by Payne;—in Oslers' System, the Evolution of Internal Medicine by Osler;—in Encyclopædia Medica, Vol. 7, History of Medicine by Willoughby;—in Encyclopædia of Practical Medicine, History of Medicine by Alison;—in Encyclopædia Britannica, Historical Notice of Surgery by Charles Creighton;—in Chambers' Encyclopedia, History of Medicine by Pettigrew; all these articles have brought up the subject to the level of our existing knowledge.

The History of Medicine, Surgery and Anatomy from the creation of the world to the commencement of the 19th century. By William Hamilton, M.B., in 2 vols. London, Colburn, 1831, Post 8vo.

Clifton : the state of Physik, Ancient and Modern, Lond., 1732.

Outlines of the Ancient History of Medicine, being a view of the progress of the healing art among Egyptians,

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Greeks, Romans and Arabians. By D. M. Moir, Surgeon. Edinburgh, Blackwood, 1831, 12 mo.

Wise: Review of the History of Medicine. London 1887. History of Medicine among the Asiatics, 2 Vols., 1868.

Collection De Chirurgiens Grecs: Bibliothèque Nationale, Paris.

Milne: Surgical Instruments in Greek and Roman Times. 1907.

Elliot: Outlines of Greek and Roman Medicine. 1914.

John Anderne and his Time: By Anderson, Lancet, Vol. II, 1897.

Thompson: The Mystery and Romance of Alchemy and Pharmacy. London, 1897.

Netter: History of Ancient Pharmacy.

Garrison: History of Medicine. 1913.

Beckman: History of Discoveries and Inventions, Art, Infirmaries and Dispensaries.

Bostock: Sketch of the History of Medicine. 1835.

Allbutt: The Historical Relations of Medicine and Surgery to the end of the 16th Century. 1905.

Minor: Medicine in the Middle Ages, Extracts from Dupony's Le Moyen Age Medicale. 1889.

Roswell Park: An Epitome of the History of Medicine, 1897.

Wilder: History of Medicine.

Remondino: History of Circumcision. 1891.

Surgery, Past and Present. By T. Spencer Wells. 1877.

History and Cure of Disease. By W. Heberden. 1806.

The Healing Art, in its Historic and Prophetic aspects. By R. Quain, Harveian Oration, 1885.

Medical men and Manners of the Nineteenth Century.—Balliere, Tindal, and Cox, 1877.

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Monro: The Scientific Basis of Medicines. Glasgow Med. Journal, 1885.

Headland: Advance in the Science of Medicine in Modern Times. Lancet, Lond., 1858, Vol. I, pp. 27-79.

Brunton: Introduction to Modern Therapeutics, Lond., 1892.

Chambers: True Art of Healing. London, 1866.

Willis: Pharmaceutice Rationalis. Geneva, 1876-77.

Bellamy: History of Surgical Anæsthesia, 1896.

Withington: Medical History from the Earliest Times, London, 1894. The Scientific Press Limited.

Griffiths: Early Welsh Medicine, 1888.

Jones and Witbington: Malaria and Greek History, 1909.

Cleveland: On Induction and its Association with the History and Progress of Medicine. Harveian Lecture, 1896.

Brunton: Pharmacology and Therapeutics, or Medicine Past and Present, London, 1880.

Practice of Medicine among the Burmese with an Historical Sketch of the Progress of Medicine from the Earliest Times. By Keeth Norman Macdoland, M.D., Late Civil Surgeon of Prome, 1879.

Packard: History of Medicine in the United States, 1901.

Meryon: History of Medicine from the Earliest Ages.

Dunglison: History of Medicines from the Earliest Ages.

Begbie: Address on the Ancient and Modern Practice of Medicine, delivered before B. M. A. in August 1875.

Gairdner: On the Physican as 'Naturalist.' Presidential Address delivered before B. M. A., 1888.

MacLeod: On the Progress of Surgery during the last half century, B. M. J. 1888.

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Miller: Historical Notice of Surgery in his Principles of Surgery. 1844.

McKay:—History of Ancient Gynaecology, 1901.

Foster: Lectures on History of Physiology during the Sixteenth, Seventeenth and Eighteenth Centuries, 1901.

Guerini: A History of Dentistry from the most Ancient Times until the end of the 18th Century.

Windsor: Historical Researches on Use of Forceps to Fix Eye. M. R. Vol. II, pp. 219, 517. 1863.

The History of Medicine, Philosophical and Critical, from its Origin to the Twentieth Century. By David Allyn Gorton, M.D. Two Volumes (G. P. Putnam's Sons) 1910.

Medical Works of the Fourteenth Century by Rev. George, Henslow, London, 1899.

The Healing Art: Published by Ward and Downey of London.

Bedroe: The Origin and Growth of the Healing Art.

Puschmann: A History of Medical Education from the most remote to the most recent times, 1891.

Macalister: History of Anatomy in Cambridge, B. M. J., Vol. I, P. 449, 1891.

Payne: An Unpublished English Anatomical Treatise of the 14th century and its relation to Vicary's Anatomy. Lancet, Vol. 1, p. 200, 1896.

Newman: Archæologica Medica.

Hundert Jahre Allgemeiner Pathologie (A Century of General Pathology), by R. Virchow, Berlin, 1895.

Ryan: History of Medical Jurisprudence in the Introduction to his Manual of Medical Jurisprudence, 1836.

Cook: The History of Medical Ethics, N. Y. M. J., 1915.

The English literature, though poor in histories of medicine, is not, however, without learned monographs on special departments of the medical science,—histories which

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deal with the origin, growth and vicissitudes of medical schools and corporations. Payne says :[1] "We have also interesting collections for the history of medical institutions such as *Memorials of the Craft of Surgery in England* by the late Mr. J. F. South, edited by Mr. D'Arcy Power ; the *Annals of the Company of Barber Surgeons*; and good histories of the Colleges and Faculties of Physicians and Surgeons of Edinburg, Glasgow and Dublin. Mr. Rashdall's important and learned work *The Universities of Europe in the Middle Ages* deals with some important periods in medical education. The Early English Text Society has published some interesting mediæval works on medicine. Finally we have in Dr. E. H. Withington's *Medical History from the Earliest Times* (London, 1894) an excellent compendium, which is less widely known than it deserves to be."

Cockayne : Leechdoms, Wort Cunning and Starcraft of Early England, 3 vols., 1864-6.

Beatson : The Knights Hospitallers in Scotland and their Priory at Torphichen, 1903.

Bedford and Holbeche : A History of the Order of the Hospital of St. John of Jerusalem, 1902.

Tenison : Chivalry and the Wounded. It contains an historical account of the Hospitallers of St. John of Jerusalem (1014-1914), 1915.

Notestein : A History of English Witchcraft from 1558-1718.

Paget : A short Account of the Royal Society of Medicine.

Oppert : Hospitals, Infirmaries and Dispensaries. 1888.

Hospitals and Asylums of the World : By H. C. Burdett, 4 vols. and Portfolio, 1888, J. and A. Churchill.

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[1] Payne : English Medicine in the Anglo-Saxon Times, p. 5.

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Rausch : Medical Education, Medical Colleges, and the Regulation of Practice of medicine in U. S. A. and Canada, 1891.

Crawford : History of Indian Medical Service 1600-1913, 1914.

Jones : The Medical History of the Confederate Army, 1861-65.

Medical History of Arabia by Dr. Amoureax, of Montpellier, 1831.

The Annals of the Barber-surgeons of London, compiled from their records and other sources. By Sidney Young, one of the Court of Assistants of the Worshipful Company of Barbers of London, with illustrations by Austin T. Young, London : Blades, East, and Blades, 1890.

The Medical Institutions of Glasgow : By J. Christie, 1888.

History of Durham College of Medicine, 1890.

English Sanitary Institutions : By Sir J. Simon, 1897.

Robert Christison : An address on the Rise and Progress of the Edinburgh School of Medical Learning. Delivered at B.M.A., August 3, 1875.

John Mason Good : A History of Medicine, so far as it relates to the profession of Apothecaries, from the earliest accounts to the present period, 12 mo. Lond. 1795.

Weddel : Arcana Fairfaxiana Manuscripta : a MS. volume of Apothecaries' Lore, nearly three centuries old. 1890.

Regnier : Hypnotisma Et Croyances Anciehnes, Progress Medical. Paris.

The list of the books, though it is imperfect in many ways, may serve as a catalogue of the chief works on the history of medicine in the European languages.

There is ample field of research in the collection of bibliography of the science of medicine as it was practised in ancient times, in the different countries of the world: Egypt, India, China, Greece, Rome and Arabia. The scholars may thus write the history of medicine—its rise, growth, and downfall—from materials scattered in books and periodicals. I have attempted below a short bibliography of Egyptian medicine :—

Prosper Alpinus : De. Medicina Ægyptorum. Editio Nova. Lugd. But. 1719.

Hermanus Corningius : De. Hermetica Medicina, Libri Duo. Helmest.

O. Borrichius : Hermetis Ægyptorum et Chemicorum Sapientia ab Hermani Couringii Animadversionibus vindicata, Hafniae, 1674.

Richard Strong Sargent : Observations on the State of Medical Science in Egypt ancient and modern. Dublin, J. M. S., Vol. XX, p. 81. Dublin, 1842.

J. Clarkson : On the State of Medicine in Ancient Egypt. Medical Times, Vols. X and XI. London, 1844 and 1845.

M. Donovan : Were the priests of Ancient Egypt the first Physicians? The Medical Press and Circular, Vol. II, p. 20, 1870.

J. G. Wilkinson : The Manners and Customs of the Ancient Egyptians : new ed., revised by Dr. Samuel Brich, 3 vols., London, 1878.

Dr. Richard Millar : Disquisitions in the History of Medicine, Part I, Edinburgh, 1811. It contains 100 pages on Egyptian Medicine and Priest Physicians.

Finlayson : Ancient Egyptian Medicine, B. M. J., Vol. I. 1893. Pp. 748, 1014, 1061.

Anatomical and Medical Knowledge of Ancient Egypt (abstract). Royal Institution of Great Britain, March 5th, 1886.

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T. J. Pettigrew: History of Egyptian Mummies, London, 1834. Pp. 44-49.

Hieroglyphics and Alphabet in Chambers' Cyclopædia, 1890.

E. A. W. Budge: The Dwellers on the Nile. London, 1891.

Dr. Thomas Young: Vol. III of Miscellaneous Works. Edited by John Leilch, 1855.

R. Caton: I-em-Hotep and Ancient Egyptian Medicine. Harveian Oration, 1904.

Comrie: Medicine among the Assyrians and Egyptians in 1500 B. C.

Stern: Papyros Ebers, 2 Vols. Leipzig, 1875.

Joachim: Papyros Ebers. Berlin, 1890.

Granville: Egyptian Mummies with observations on the Arts of Embalming, 1825.

"Within the past twenty years there has been a remarkable revival of interest in the history of medicine. Chairs or lectureships have been established in Continental, English and American Universities; Societies and Clubs devoted to the study of the subject have been started; instead of one there are now three or four Journals and the literature has been enriched with innumerable monographs and articles. A comparison of the volume of the *Index Medicus* for ten or twelve years ago with a recent one, shows how actively medicine is participating in the study of origins, and how much as a profession we are being influenced by modern historical methods." (Osler.)

In England the FitzPatrick Lectureship has been founded by a lady, Mrs. FitzPatrick, in memory of her husband, Dr. FitzPatrick, for the advancement of medical history in 1901. We have the following contributions: Dr. Payne: English Medicine in the Anglo-Saxon Times. FitzPatrick Lectures, 1903. Payne's contributions are numerous: Introduction to the reprint of the Cambridge edition of Linacre's Latin Version of the De Temperamentes of Galen; Contributions to the History of Epidemics; Biography of Linacre in the Dictionary of National Biography.

Norman Moore: 1. John Mirfeld (1393) and Medical Study in London during the Middle Ages.

2. Dr. Edward Browne (1644-1708) and the Education of Physicians in London in the 17th Century.

3, 4. History of the Study of Clinical Medicine in the British Islands.

The FitzPatrick Lectures for 1905.

The Institute for the study of history of medicine at the University of Leipzig, as a memorial to Prof. Puschmann is a step in the right direction.

"The Charaka club was established in 1898 by members of the medical profession in New York interested in the literary, artistic and historical aspects of medicine. It is called after Charaka, author of the oldest extant work on Indian medicine."[1]

But while so much is being done in Europe and America, we are quite apathetic in India. The neglect of the study of the history of medicine in this country is truly remarkable. One would naturally suppose that every student of medicine would receive some instruction regarding the process by which the science of the healing art has been gradually developed and built up. Such however is not the case. "By the history of medicine we do not mean medical antiquarianism or the dusty delights of the bibliomaniac, but the history of medical concepts. The study of the genesis and evolution of ideas is always interesting, and often most instructive; dead seeds of

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[1] B. M. J., April, 1905. "The Charaka Club and Prof. Osler," p. 728.

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thought may be found in those intellectual tombs lining the walls of libraries, which may haply under favourable influences be quickened into new fruitfulness,"[1] The history of medical ideas should be thoroughly mastered for the right comprehension of the present state and tendency of medical thought. There is not a single chair of the history of medicine in the Indian Universities, nay, I am sorry to say, even in the English Universities. Far from learning the history of Indian Medicine, the graduates of the Calcutta Medical College scarcely know any history of the system that they practise. The Bibliotheca Graeca of Fabricus is full of information about the literary history of the Greek physicians, but from the Bibliotheca Indica, we cannot derive even a scanty knowledge about the Hindu medical science and medical authors.

The English translation of Suśruta Saṁhitā was undertaken by the Asiatic Society of Bengal in 1883. In that year, Fasc. I and II were published in the Bibliotheca Indica ; but owing to the untimely death of the translator, Udoychánd Dutt, the publication had to be postponed. Its continuation by Aghorechunder Chattopādhāya, resulted in the issue of Fasc. III, in 1891 ; and then it was again stopped. In 1897, Hoernle, one of the past presidents of the Society, commenced the translation with short commentaries, *de novo*, but only Fasc. I was published. Since his time, nothing has been done as yet to complete the translation. India is the best field for study of the comparative medicine. Here we daily find practitioners of the healing art, well-versed in the lore of their respective systems of treatment ;—European practitioners, Homœopaths, Hakims, and Kavirājes or Vaidyas. But this

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[1] B.M.J., 1894, Vol. II, p. 1248.

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opportunity is not taken advantage of by scholars. Literary contributions on Indian medicine are few and far between.

The Asiatic Society began the English translation in 1883; but during the last thirty years, through various causes, not even a section of the book has, as yet been translated. And I think that steps should be taken to finish it, without delay. The medical science of the Hindus has a claim upon the Society. Our worthy President in his Annual Address in 1908, remarks: "It must be conceded with some regret that the Society, in the past, has not done quite as much towards the investigation of the history and progress of Indian medicine as it has done in other directions. By an accident, which is somewhat unfortunate and inexplicable, the energies of our members, who have devoted themselves to philology and antiquities, have been steadily kept away from the history of Indian medicine. It is true that more than seventy years ago the Society published an accurate edition of the great Sanskrit work on Indian Medicine known as the Suśruta. It is also true that in our own generation attempts were made twice to publish a reliable English version of the same work, but, although the undertaking was begun on each occasion by a distinguished scholar, the attempt was unsuccessful and no progress worthy of any mention was made."[1]

The book was translated into Arabic before the end of the 8th century A.D. It is called "Kitab-Shawshoon-al-Hindi" and also mentioned as "Kitab-i-Susrud" or book Sushruta by Ibu Abillsaibial. It has been translated into Latin by Hessler (1844-47) and into German, by Vellurs. It has been translated into the modern languages of India;

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[1] The Hon. Justice Sir Asutosh Mookhopādhāya, Kt.: Annual Address, Asiatic Society of Bengal, 1908.

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but strange to say, it has not as yet been translated into English.[1]

That an English translation is urgently wanted, cannot be doubted. In the First Indian Medical Congress, 1894, Brig.-Surg.-Lieut.-Col. T. H. Hendley, in his paper on the "Indian Systems of Medicine" remarks: "The subject is extremely interesting and our Indian members may add much to our knowledge of it by translating the best works."

The history of the publication of Suśruta Saṁhitā in original Sanskrit, it may not be out of place here to remark, shows a parallelism of circumstance. It was ordered to be printed by the Government of India; but the first volume and three-fourths of the second of the Suśruta having been printed, it was left unfinished, and was afterwards described as "an accumulation of waste paper" by the Government which had originally ordered, and had expended vast sums upon, their publication (Dec. 1835). The Asiatic Society of Bengal came to the rescue; and "with the spirit and zeal which has ever distinguished it, undertook, at their own risk, to complete the abandoned work, and so won the applause of the learned societies as the first publisher of the original Suśruta Saṁhitā." This edition had been exhausted long before and cannot be procured now.

There are a large number of unpublished manuscripts of medical works which deserve publication, not only on account of their historical and philological importance, but

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[1] The work has recently been translated and published by Kunja Lal Vishagratna, a Kabiraja of Calcutta; but notwithstanding the laudable efforts of the translator, the translation has rather been free and even the Botanical names of the medicinal plants have not been added; factors which no doubt detract the value of a translation.

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also on account of their medical value. Funds should be provided from public sources and our university should publish some of the important works. As an instance, I may mention the Bhela Saṁhitā, of which there is only a single manuscript in the Tanjore Library. The book is a storehouse of information on the ancient system of medicine as delivered by the sage Ātreya in his lectures to his pupils Agniveśa, Bhela and others. The treatise is thus older than the celebrated Caraka Saṁhitā in its present recension. The history of medicine is a record of observations, thoughts and achievements of a few great minds, and their records show the development and growth of ideas, beliefs, and doctrines. Steps should be taken to print the numerous manuscripts on medical subjects written in Sanskrit which exist in the libraries of India. The Sanskrit medical literature if published would fill a large library.

We often find quotations from Sanskrit medical texts, and of these quotations, it may be said with truth what Ogle, in the preface to his excellent translation of Aristotle's work "On the parts of Animals," says of the first of the biologists, that "the works are more often quoted than read, and it may be added, much more often misquoted than correctly quoted."

The value of a knowledge of modern languages to a physician had come to be understood, but many think that a knowledge of Latin, Greek and Sanskrit is not of any direct use to a doctor. I am an advocate for an increase in classical education, for the ancient literature possesses a certain educational value. Its cultivation is no bar to high scientific and technical studies. There have been many great savants in medicine who were also famous writers. The study of the dead languages is of the greatest utility in educating the mind,

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and a sound elementary knowledge of them conduces to the proper understanding of the development of medical truths.

The ancient books in India are written in Sanskrit language. As the classical language gradually became a dead language, scientific writings and religious compositions became in course of time misunderstood. In the address to the graduates at the Madras University, 1898, we find the following remarks: "Those of you who have studied the learned shastras of your forefathers must have found ample room for opinion, that not only is modern sanitation compatible with caste, but that caste itself, although allied itself with religious observances, is a magnificent and elaborate system of sanitation . . . . . . But in the absence of the knowledge of Sanskrit in which these rules were conveyed, tradition, which has been the method of transmission from generation to generation, has led to no little distortion of the original dicta." Sir William Jones says: "Infinite advantage may be derived by Europeans from the various medical books in Sanskrit, which contain the names and descriptions of Indian plants and minerals, with their uses, discovered by experience in curing disorders: there is a vast collection of them from the *Cheraca*, which is considered as a work of Siva, to the *Róganirūpana* and the *Nidana* which are comparatively modern."[1] For the accurate rendering of Sanskrit works on medicine into the modern languages an acquaintance with Sanskrit is indispensable.

Rai Bahadur Kanay Lall Dey[2] in his presidential address on 'Indian Pharmacology: A Review,' makes the following observations:

"It may not be unprofitable to glance for a moment at the ancient Sanskrit Materia Medica of a time long

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[1] Vol. I, p. 358.

[2] Transactions of the first Indian Medical Congress, 1894, p. 525.

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preceding the advent even of Mohammedanism in India, over seven centuries ago. I have quite lately found great pleasure and no small instruction in a research into the old Sanskrit works dealing with the classification of vegetables and the utilization of their parts in medicine as practised by the physicians of India of the Puranic era some thirteen centuries ago. The elaborate directions for the collection of drugs and their subsequent manipulation is, strange as it may seem to European minds at least, not by any means unworthy of the methods of to-day, and you will perhaps be as astonished to learn as I was to find that some of the mistakes of the most ancient of these Sanskrit writings survive in some of the best books treating of the indigenous drugs of India at the present time. They show the great progress which the ancient Hindus had made in the healing art. Minute instructions were given on every conceivable point, such as the gathering of herbs, preparation of medicines, etc. Annual plants were to be collected before the ripening of the seed, biennials in the spring, and perennials in the autumn; twigs were to be of the present year's growth: the roots to be collected in the cold season; the leaves in the hot season; and the barks and woods in the rains. There were no fewer than twenty-six forms of medicine, including powders, extracts and boluses, decoctions and infusions in water and milk, syrups, expressions, distillations, fermentations, and medicated oils, many of them crude enough in their exhibition but wondrously efficacious in the respective ailments for which they were designed. Not, however, until the quickening influence of British supremacy had been fully established in India was any notable attempt made, of which there is any record, to improve or to augment what was already known of the medicinal resources of this country. Sir William Jones' "Botanical Observations on Select Indian Plants," was one of the earliest contributions in this direction: John Fleming's "Catalogue of Medicinal Plants" (1810); Ainslie's "Materia Medica of Hindustan" (1813 and 1826); Roxburgh's "Flora Indica" in 1820, and the labours of Wallich, Royle, and later, of Drs. F. J. Mouat and F. N. Macnamara and other ardent botanists did much towards resolving the chaos in which they found the vast mass of material at their disposal into some degree of scientific arrangement.

The gradual progress of Indian pharmacology, the widening and deepening of its influence, and its possibilities in contributing to the health and consequent prosperity of this vast Empire have been in complete sympathy with the gradual development of commerce, medicine, and science in this country. Clear of the mythology and superstition from which, not unlike the medical science of Europe, it evolved, but which lingers still in India, the science has in some measure at least demonstrated the marvellously liberal provision of curative and remedial agents within the reach of the teeming millions of this Empire."

The votaries of medicine should while actively pursuing their profession be learned in it and in the broad fields of learning other than in their own lines. As members of a learned profession, each of us should have an acquaintance with the thoughts and sayings of previous thinkers. It has been remarked in the Suśruta Saṁhitā that knowledge of many allied branches of science is highly useful to a student of medicine. Suśruta says[1]: "Any one who knows only a single science, cannot have true knowledge of that science, hence a physician should be well versed in many other sciences besides the science of medicine." "When any subject which belongs to other sciences is referred to in this treatise, the student should know its meaning from the expositions by men learned in those sciences, for it is impossible in treating any science to avoid references to other sciences." For a series of ages —from the time very probably of Hippocrates to the Dark or Middle Ages—the tradition always existed that the physician should be a man of science trained after the best manner and according to the discipline of the science of the age. There are instances of eminent physicians who delved into literature and embellished it while engaged in serious investigations of medical problems. Linacre (the founder of the College of Physicians), Caius, Locke, Sir Thomas Browne (the celebrated author the *Religio Medici*), Rabelais, Galvani, Berzelius are well known names in the annals of medicine and cognate sciences. Brunfels, Fuchs, Gesner, Grew, and Linnæus immortalized themselves by their labour in the field to open up botanical glories. Thomas Young deciphered the Egyptian hieroglyphics, formulated the Undulatory Theory of Light and was master of Latin, Greek, Chaldee, Arabic, Syriac, Hebrew, Persian and Samaritan. Black, Bell (the inventor of telephone), Gray, Owen, Aggasiz, Huxley, Helmholtz are familiar names to the students of science. The immortal Harvey, Sydenham (the Father of English medicine), Boerhaave, Haller, Mead, Morgagne, Andral, Laennec, and Rush will ever be remembered as eminent physicians and scholars. The names of Adams, the renowned translator of Hippocrates and Paulus Aegineta; Greenhill, deeply versed in Greek and Arabic lore; Boussemaker and Daremberg, the editors of Oribasius and other Greek and Latin classics; Littré,

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[1] अन्यशास्त्रविषयोपपन्नानाञ्चार्थानामिहोपनिपतितानामर्थवशात्तेषां तद्विद्येभ्य एव व्याख्यानमनुश्रोतव्यं कस्मान्नह्येकस्मिन् शास्त्रे शक्यः सर्वशास्त्राणामवरोधः कर्तुम्।

एकं शास्त्रमधीयानो न विद्याच्छास्त्रनिश्चयं।
तस्माद्बहुश्रुतः शास्त्रं विजानीयाच्चिकित्सकः॥

Suśruta Saṁhitā, I. iv.

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the lexicographer and the learned editor of Hippocrates will be handed down to posterity as scholars whose names are emblazoned on the roll of fame. Simpson, Brodie, Brown, Trousseau, Malgaigne, Billroth, Sloane (the true begetter of the magnificent institution, the British Museum), and Holmes will be remembered as brilliant lights in their profession and famed for their intellectual cultivation. Some of these men were in the front ranks of literary giants. Many members of the medical profession have won great fame as poets. Goldsmith, Schiller, Keats, and Crabbe became immortal from the sweet art of the lyre. Thomas Lodge (the Elizabethan dramatist), Akenside, Haller (the great physiologist), Moir ('Delta' of Blackwood), Oliver Wendell Holmes ('the autocrat, professor and poet at the breakfast-table'), and Thomas Gordon Hake were equally famed in literature and art. Fracastorius (the hero of whose Latin poem "De Morbo Gallico," gave his name to Syphylis), Sir Samuel Garth (who sang the wrath of the physicians against the apothecaries), Smollet, Armstrong, Erasmus Darwin (author of the 'Loves of the Plants'), Leyden, Aveling, Bridges, Weir-Mitchel (the author of The Mother and other poems), Conan Doyle (the creator of Sherlock Holmes 'the Newton of detectives,' Dr. Watson, the hero of his detective stories, and Dr. Cullingworth "the Napoleon of quacks" in "The Stark Munro Letters"), and others will ever be remembered for their attainments in poetry and science. Da Costa, in his inaugural address at the opening of the Harvard Medical School in 1898, remarks: "He (the scholar) was never more needed than now when every atom of discovery is heralded as of prodigious importance and as sure to influence immediately the laws of the universe . . . . It is the scholar whose knowledge teaches him to appreciate correctly the different fads and 'isms' which are constantly cropping up and which he recognises as old errors with new faces." Indeed among medical men of equal calibre as regards their skill, the physician with the widest general culture proves to be the better man.

In the recent Calcutta University Commission Report (1917-19), it is no doubt gratifying to find recommendations for the chairs of Pharmacology and of the History of Medicine for our University. As regards funds for the establishment for chair of History of Medicine, the members of the Commission have expressed the hope that private generosity will furnish the necessary funds. History of Medicine has not been prescribed as a subject in the curriculum of studies for the candidates for medical degrees of the University. So there is, we are afraid, very little chance of the establishment of such a chair at an early date. We reproduce here the recommendations from the Report of the Commission :

21. *Proposed Chairs of Pharmacology and of the History of Medicine.*—We recommend further the establishment of a chair and laboratory of pharmacology, and of a chair of the history of medicine.

The chair of pharmacology should, we think, be provided by the Government in connexion with the Calcutta Medical College. At the present moment there is a chair of materia medica which is held jointly with the chair of clinical medicine. It would be suitable in future to relieve the professor of clinical medicine of the subject of materia medica and to unite that subject with the chair of pharmacology. We think the chair of the history of medicine should, if possible, be established by private benevolence and should be a university chair attached to the Calcutta Medical College; and the lectures, or at any rate certain courses, should be open to the general public. We have in Chapter XXXIV, paragraphs 112-120, explained the

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procedure which we regard as suitable for the selection of occupants of university chairs tenable at a particular college, and we think this method should be used in connexion with the chair of the history of medicine.

22. *Use of the above-named chairs for investigations in connexion with the Ayurvedic and Unani systems.*—The chairs of pharmacology and of the history of medicine are desirable on general ground; but they are also desirable because it is in connexion with their teaching that effect should be given to the demand, fully justified, that the ancient systems of Indian medicine should receive attention by the University of Calcutta.[1]

23. *The University cannot train students in the Ayurvedic and Unani systems.*—It is clearly impossible that we should ask the University to undertake to train students on systems which ignore what has been done in science and medicine for centuries, although they have preserved valuable knowledge. As Sir Sankaran Nair, the Member for Education, pointed out in a speech of March 24th, 1918, at the Ayurvedic and Unani Tibbi College at Delhi, the study of modern sciences is indispensable for medicine.

24. His Excellency Lord Pentland struck the same note in a speech recently delivered at the opening of an Ayurvedic hospital in the Cochin State.[2]

> "Medicine," he said, "whether it be called Ayurvedic, Unani or western, must follow the same methods and the same aims and submit to the same tests; . . . . any system of medicine must be correlated with every advance in the allied sciences such as chemistry and physiology."

Lord Pentland further pointed out the necessity for examining and standardising the drugs used in the indigenous systems.

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[1] See also Chapter XLII, on Oriental Studies, paras. 6-8.

[2] Reported in the *Indian Medical Gazette* for March, 1918.

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25. There is an obvious and promising desire at the present moment among the numerous adherents of these systems for closer touch with modern scientific methods. In time no doubt they will be able to make available for the practitioners of western medicine the traditional knowledge which is of real value; and will reject, as western medicine continually rejects, those theories which are mere survivals, and cannot stand the test of experience. The distinction between Indian and western 'systems' of medicine will then disappear.

26. *Chair of Pharmacology and Materia Medica.*—Although pharmacology figures as a subject of the university curriculum there is no professor of pharmacology in Calcutta, nor we believe, elsewhere in India. It is only right however to point out that pharmacological investigations of the first importance, on emetin and other substances, have been carried out in the pathological department by Sir Leonard Rogers. But the subject is one which should be provided with a separate department, similar to the departments in London, Cambridge, Edinburgh and other universities, and in such a department it would be fitting that a systematic investigation should be undertaken of the drugs used in the Ayurvedic and Unani systems, as well as of the other drugs furnished by the immense variety of the natural products of India. As pointed out in paragraph 21, we think that the subject of materia medica should be detached from the chair of clinical medicine and should be dealt with by the professor of pharmacology.

27. *Chair of the History of Medicine.*—The chair of the history of medicine of which we propose the establishment should deal not only with the history of medicine in India, but with the history of medicine generally, and we think it essential that it should be held by a qualified medical man. It is only in the light of modern medicine

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that ancient systems of medicine can be judged in their true perspective and relationships. The subject is one of importance not only for medicine but for the history of science and civilisation generally. In a number of European universities, notably the University of Paris, there is a chair of the history of medicine; and there is a growing sense of the necessity, in these days of specialisation, of establishing teaching which shall give to the specialist a wider view of his subject. Sir William Osler, the Regius Professor of Medicine in the University of Oxford, has drawn attention to this aspect of the matter in his interesting preface to the recently published Studies in the History and Method of Science, edited by Dr. Charles Singer,[1] which deals largely with the history of medicine. We hope that private generosity may furnish at an early date the funds for the establishment of such a chair as we suggest.

The question may be asked: What is the importance of the study of the history of medicine? Let us consider the advantages of such a study in detail.

I. Ferdinand Hoefer in the Introduction to his valuable History of Chemistry says: "I have always thought that the best method of popularising scientific studies, generally so little attractive, consists in presenting as in a panorama, the different phases a science has passed through from its origin to its present condition." "History," says Gibbon, "is indeed little more than the register of the crimes, follies and misfortunes of mankind." In general history, the scholars try to unravel the factors which led to the downfall of ancient empires such as those of the Greeks, Romans, Hindus, Arabs and Moguls, they take delight in tracing such downfalls to errors and mistakes of cruel tyrants; but in the history of sciences, mistaken theories and erroneous facts are thought unworthy of their scholarly instincts. But errors of king, and false theories of scientists are equally important for the progress of the world in right direction. "No science nor, indeed, any single form of knowledge can be properly appreciated apart from the records of its evolution; and it is as important to be acquainted with the errors and misleading theories which have prevailed in regard to it, as with the steps by which real progress has been made" (Wotton). Fuller remarks[1]: "History maketh a young man to be old without either wrinkles or grey hairs; privileging him with the experience of age without either the infirmities or inconveniences thereof. Yea, it not only maketh things past present, but enableth one to make a rational conjecture of things to come. For this world affordeth no new accidents, but in the same sense wherein we call it a *new moon*, which is the old one in another shape; and yet no other than that hath been formerly. Old actions return again, furnished over with some new and different circumstances." Moore[2] says: "The study of history is most worth pursuing when the consideration of the past can be made useful to us in the present. The lesson, "*Ars longa, vita brevis*," is plain enough wherever we contemplate the attempts of men to learn and to teach medicine. Further than this, we may learn that only those subjects become really valuable to the student, in which he has sought out things for himself, so that his knowledge does not rest on the dicta of a teacher.

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[1] Published by the Clarendon Press, 1917.

"Last, we may conclude that medicine in itself, with its essential preliminary, anatomy, contains sufficient opportunities of training in every form of observation and of logical deduction from what is observed, and that, for the

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[1] B. M. J. 1902.

[2] Norman Moore: Fitz-Patrick Lectures: Medicine in the British Isles, pp. 82-83

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rest, a mind which has been opened by a sound literary education is that best adapted to follow the lifelong study of medicine which is the duty of every physician. These are the conclusions to which I have been led by a study of the history of the education of physicians in London from the time of John Mirfeld to that of Edward Browne, from the Middle Ages to the time when the methods of study which we now follow began to be used." The history of any science is always worthy of study and attention. In medical science, the students often overlook and loose sight of the patient labours of the early workers, many of whom laid the foundation of discoveries that have since proved of inestimable value to the civilised world. Many of the empirical methods of modern times may be traced a long way back. Allchin, in his Harveian Oration, 1903, remarks that "it is easy from our present standpoint to overlook the help that the advances made by these workers (Gilbert, Glisson, Willis, Young, Sydenham, Heberden, Hunter, Prout, Bright, Watson, Parker, Jenner, Harvey, Gull, Clark, and Reynolds) contributed to the general progress; nor are those suggestions which proved to be erroneous altogether to be disregarded, since in their refutation the right way often became manifest." The mediciner, even in ancient times, is advised to be "skilled in the judgment and science of the wise and skilful physicians who have preceded him."[1] "Professor Hamilton said that even in medicine, history repeats itself. The pathology of our forefathers was called 'humoral pathology.' It was supposed to have received its death blow by 'Cellular pathology.' Recent discoveries would seem to point to a revival of the humoral pathology of the past. The more we became acquainted with diseased processes,

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[1] Griffiths: Early Welsh Medicine, Extract from Howel's Work.

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the more we are convinced that no one system, however plausible, would explain the whole of them."[1]

The object of the historical study of medicine is to describe the process by which the principles of medical science have been wrought out in the history of the world from prehistoric times till the present day. Many ancient and modern scholars have worked in this wide sphere.

"A system cannot be thoroughly comprehended until we know all the consequences which have actually followed, and which it is the business of history to trace from it in the application of principles."[2] The student of medical history must make himself intimately acquainted with general history and trace the influence which the science of medicine has exerted in the historical development of the civilized nations.

I reproduce here a letter addressed to the editor of the British Medical Journal in 1886. The letter speaks for itself and its suggestion may be availed of with profit, in prescribing subjects of examination for medical degrees.

HISTORY OF MEDICINE AS A BRANCH OF PROFESSIONAL EDUCATION.[3]

SIR,—May I suggest, while the scheme for granting medical degrees for London students is still under consideration, that a very suitable item in the requirements for a title which should be something more than a mere licence to practise, would be an acquaintance on the part of candidates with the history and progress of medicine.

One is not disposed to deny that a man may be perfectly capable of opening an abscess or expressing a placenta, without knowing anything of the theories of the medical schools, or the vagaries of bloodletters and water-doctors; but it is certairly to be desired that a man who aspires to the higher ranks of the profession should be conversant with, at any rate, the more sailient facts which have advanced or retarded the progress of medicine in the past.

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[1] B. M. J. 1893, Vol. II, p. 1122.

[2] Horn : History of Jurisprudence, p. 160, 1866.

[3] B. . J, Vol. II, p. 393, 1886.

Such knowledge is not by any means without its value. History repeats itself; and one of the surest methods of avoiding error in the present and in the future is to cultivate an acquaintance with the mistakes of those who have preceded us on the difficult and uncertain path of progress and research.

The subject is one which might well form part of the classical education to be exacted from future aspirants. At present beyond a vague notion of a gentleman called Hippocrates, and of another called Galen, most medical men know little, and would be sorely plagued if a patient more than usually erudite ventured to allude to the subject—I am, sir, your obedient servant,

Alfred S. Gubb.

There is no doubt that nowadays the history of medicine has become more attractive. The University of London had lately added the history of medicine to the subjects of examination for the M. D. degree. A chair of the history of medicine had been founded in the University of Rostock.

II. "For the student the educational aspect is of incalculable value, since medicine is best taught from the evolutionary standpoint. What a help it is to give early in his career a clear view of the steps by which our present knowledge has been reached! And yet in the present crowded state of the curriculum, it seems very undesirable to make the history of medicine a compulsory subject. An attractive course will catch the good men and do them good, but much more valuable is to train the mind of the student to look at things from the historical standpoint" (Osler). The graduates in medicine, surgery and midwifery embark on their professional career without any appreciation of the history of the subject.

Students of our universities know little of medical history. They speak of *facies Hippocratica* but they are ignorant about the works of the renowned Father of Medicine. His works are more often quoted and talked about than read; indeed many practical surgeons are not ashamed to own themselves ignorant of the traditional knowledge of the Asclepiadæ as crystallised by Hippocrates. They do not know that Colchicum is named after Media of Colchis, that Sertuner adopted the term "Morphinum" from "Morphæus," the son of the god of sleep (Somnum), that Achelia Mitford plant was discovered by Achilles, that the use of Acetum Scillæ and Aniseed we owe to Pythagoras, and of hellebore and iron to Melampus. To them, such terms as Atropa Belladonna, Centaury, etc., are words without meaning. They never think of the stories that gave birth to such words. They are ignorant of the facts that Themison first distinguished rheumatism from gout, Menacretes invented the diachylan powder, Avicenna invented the method of silvering and gilding pills, Oribasius popularised the necklace method of treatment and Sir Theodore Mayerne introduced calomel and blackwash in medical practice, though the former is alleged to have been known in India many centuries before it became known in Europe. They do not know how much the present system of medicine owes to the Arabs, and the indebtedness of the latter to the Greeks and Hindu systems of treatment. They scarcely know the names of Geber,

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Rhases, Avicenna, Paulus, Celsus, and Vāgbhaṭa. They know little of Goulard, Glauber, Scheele, Sydenham and others. They will be astonished to learn that the first London Pharmacopœia adopted nearly half the Formulary of Mesue. They do not know the history of temple sleep, the origin of royal touch, cramps of rings, and the abracadabra mystery. Of the influence of ladies in the names of drugs, there are interesting accounts. Myrrh is named after Myrrha, the daughter of Cynirus, King of Cyprus ; Mint is after Mentha ; Nepenthes was the drug Helen mixed for Telemachus in a 'mirth inspiring bowl' ; Atropa Belladonna—so called from Atropa, the eldest sister of the Fates, who cut the thread of life, and from Belladonna—so called from the Spanish ladies who made use of the plant to dilate the pupils of their brilliant black eyes ; Colchicum from the inhuman Medea of Colchis ; Cinchona is named after the wife of the Viceroy of Peru, the fourth Count of Chinchon ; and the otto or atar is named by the famous Nur Jahan, who on the occasion of her marriage with Emperor Jahangir, observed and collected the scum on the surface of rose water in a canal in the garden of the palace and named it Atar-Jahangiri. To Cleopatra is ascribed a few prescriptions, and two writings, one of which *Diseases of Women* has survived. The knowledge of these facts would not of course relieve the suffering humanity, but surely they add some amusement and interest to the study of materia medica by students. Celsus has preserved some of the sayings of the empirics : "Diseases are not cured by talk but by drugs" ; "The important question is not what causes disease but what dispels it" ; but surely we live in a better age, and the etiology of diseases and history of drugs must be learnt by a scientific physician.

"Medicine preserves, in its terms and names, much that carries us back beyond its written history to the days of mythology, and we still see foot-prints in our phraseology enabling us to trace the growth of our calling through fetichism, miracle cure, and astrology, to a more rational system. We, for instance, find the names of the Olympic gods preserved and variously applied through medicine. Saturnine poisoning reminds us of Saturn, and ammonia recalls Jupiter Ammon. We almost daily handle vulcanized rubber instruments, while Mercury, the messenger of the gods, now serves us. The word Hygiene is a monument more enduring than brass to Hygiea, the daughter of Esculapius, the god of medicine. The tendo-achilles recalls the hero of Homer's Iliad, and also the delusion of ancient surgeons, that wounds here were fatal. Lunacy comes to commemorate the fact that our ancestors believed the lunatic's brain had been acted on, and that his mind was controlled by the moon. The word artery antedates Harvey, and tells of a time when these vessels were supposed to carry air, and not blood, while the ever-present calomel, derived from Greek words meaning a good or beautiful black, tells of a time when calomel was æthiop's mineral, or hydrargyrus cum sulphure, and not the white chloride of to-day. So names live after the reason for them is forgotten.

In such terms as obstinate, persistent, malignant, or when we say a disease attacks, invades or manifests itself, we use terms which once carried the idea that disease was an entity, endowed with certain passions and vindictive purposes, and that the doctor's province was to take the patient's side in the deadly strife [1]

It seems curious that while the study of history of other branches of learning are thought essential for the liberal education of the young aspirants to fame in their

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[1] Dickinson: Delusions in Medicine. Annual Address delivered before the Medical Society of Virginia, 1902.

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respective callings, medicine is the only subject, the historical aspect of which is equally neglected by the professors and students alike. "No student in divinity considers his equipment complete without a course of Church history; no student of law who aspires to the higher grades of the profession denies himself a survey, at the hands of a competent lecturer, of the successive phases through which the conception of right and its practical applications have passed. Medicine alone among the sister professions permits its votaries to leave its hall without that study of its past which "intelligent curiosity" alone would of itself seem to impose as at once a pleasure and a duty."[1]

III. The knowledge of the history of medicine is exceedingly useful for those who like to carry out research work in some departments of the science. "To take stock," says Mr. Knaggs,[2] "as it were, from time to time of what has happened in days gone by is not without its help in enabling us to estimate truly and direct the progress in the present, and it even has its bearing upon the prospects of the future. It is not wise in any department of knowledge, be it history, science, art, or any other, to confine one's attention simply to the present; we should seek to draw wisdom from our stores of the past to influence our actions in the present, and our judgments for the future." One must know the amount of progress achieved in a field of enquiry by scholars, before he can attempt any serious investigation on the subject. Without such knowledge, much of his labour might be misspent on questions already solved by others in the field. As an instance I quote here the words of Professor Bier: "It is well known that the cupping-glass is amongst the oldest therapeutic remedies. But when I lately—though, alas!

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[1] Lancet, Vol. II, Sept. 7, p. 654. 1895.

[2] A Reminiscence of Forty Years, Lancet, Vol. II, p. 1425. 1893.

MINISTRY OF CULTURE · GOVERNMENT OF INDIA
सत्यमेव जयते
संस्कृति मंत्रालय · भारत सरकार
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much too late—looked up its literature, I was not a little astonished to learn how extensively and variably this venerable instrument has been used by all peoples of the world, by the lowest primitive and highest civilized nations; its history extends to our day. If I had studied the literature at the right time, we could have saved much labour, for I learned that numerous difficulties—to overcome which, we had much trouble—had been solved long ago. I furthermore learned that the idea of sucking out pus with the cupping-glass, which I believed was originated by me, had been in use in olden times, and in certain instances has been practised repeatedly."[1] The German historian Karl Sprengel justly points out that many remedies re-discovered in modern times were referred to by Dioscorides. Among these are the application of wool-fat to wounds, external applications of castor oil, male fern against tape worms, elm bark for eruptions, horehound in phthisis, and lac for ulcers. Bottini (1837-1903) anticipated Lister by publishing a work on the use of carbolic acid in surgical operations; and he was one of the first to recognise the rôle played by parasitic organisms in the etiology of pathological conditions. Servetus and others seem to have anticipated the immortal Harvey in the discovery of the circulation of the blood, although without apparently realising its importance or significance.

Belloste (1654-1730) "was one of those writers whom Verneuil called the minor prophets of surgery. That distinguished surgeon said that if one had the curiosity to look into forgotten old books, it would be found that the majority of important discoveries, the fruits of which we now enjoy, belong not to the celebrities of the profession, but to men of whom the world knew little while they lived,

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[1] Bier's Hyperæmia, Translated by Blech. 1909, pp. 79-80.

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who worked far away from the great centres of intellectual activity, and who never wore the professorial purple. In Belloste's day the practice in dealing with wounds was to keep them widely open with tents so that discharges might escape and remedies might be applied to every nook and cranny in their depths. Where suppuration was profuse the dressing was changed every day, sometimes twice a day, to the grievous distress of the patient. Belloste strongly denounces these "cruel methods," and teaches that wounds should be dressed "gently, quickly and seldom." He observed that the admission of air to wounds had a bad effect; this he explained by the fact that the atmosphere was full of very subtile particles or atoms which he suggested might produce "very dangerous corruptions, when they attach and agglutinate themselves to sensitive parts." "Evidently," he says, "the 'corpuscles of the air in hospitals are more charged with subtile and caustic particles than that of other places; and owing to them, unless great care is taken, wounds become chancrous, putrid, and often fistulous and incurable. Hospitals long retained the foul smell engendered by patients. The cause of this, in Belloste's opinion, could be nothing else than the "impure atoms" which adhered to the walls, and which obliged those who wished to live in the same place to cover them with plaster or chalk for the purpose of preserving themselves from the infection that might arise from their "morbific ferments." If, he argues, these atoms have sufficient tenacity, consistence, and fermentative virtue to attach themselves to a hard, even body, such as a wall, and to remain there several months without losing their foul smell or their disposition to erode and putrefy, what will they not do in exposed wounds, where the fibres are always moist, glutinous, delicate, and without support? With the substitution of

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the word "germ" for "atom," these passages seem to show that Belloste's prophetic soul dreamed dimly indeed and vaguely of things to come."[1]

A curious illustration is supplied by Dr. James Johnson in the narrative of his visit to Pompeii: "The Dilator or Speculum, for which Mr. Weiss of the Strand obtained so much repute a few years ago has its exact prototype in the Bourbon Museum at Naples. The coincidence in such an ingenious contrivance would be absolutely miraculous; but unfortunately there is a key to the similitude, which destroys the charm of astonishment. A crafty Frenchman imitated from memory, and with some awkward deviations, the Pompeian Speculum, and passed it off as his own. Weiss improved upon the Frenchman, and hit upon the exact construction of the original! Many modern discoveries may probably have originated in the same way."[2] The instrument commonly known as Hey's saw was first invented by Avicenna, and Civial was anticipated by Ammonius, a lay lithotomist, who employed an instrument for breaking stones in the bladder, in the time of Hippocrates.

"In the Papyrus Ebers, which is a copy of an Egyptian medical compilation already old in the time of Moses, there is mention of polyuria, and it is hard to conceive that such a marked departure from health could at any time have escaped observation; yet no notice of it is to be found in Greek writings earlier than those of Aretaeus of Cappodocia (*circa* A. D. 150), who is supposed to have been a contemporary of Galen, and was probably also a Roman physician. His description, like that of the unknown Egyptian priest, or that of Galen, who wrote at length upon the disease, lays stress only on the polyuria and thirst. The important point that the urine contains sugar appears to have escaped the notice of all early European writers; nevertheless, if we trust some passages of the Ayur Veda (*circa* A. D. 500 ?—500 B.C., see my "Surgical Instruments of the Hindus," Vol. I, Introduction) it was known at that time to the Hindus. In a Cingalese writing of the fifteenth century diabetes is undoubtedly referred to as "Madu mehe" or "*honey urine*," so that in this respect European knowledge lagged sadly behind; for it was not until 1679 that our countryman Willis mentioned that the urine of diabetes has a sweet taste. A century later Dobson of Liverpool demonstrated the presence of sugar.'[1]

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[1] B. M. J., Nov. 4, 1905. Vol. II, p. 1220. Dr. H. Folet: Echo Medical du Nord. July 22nd, 1905.

[2] Miller's Surgery, p. 11, foot-note.

IV. "As a study, the history of that branch of science which has to do with healing has peculiar attractions. With foundations in anthropology medicine has close affiliations with most of the theologies, many of the philosophies, and with the pseudo-sciences of alchemy and astrology. To trace its gradual evolution, to study the relations which it has borne to the intellectual movements at different periods, is the work of scholars trained in the modern methods of research" (Osler). The study of anthropology and medicine presents us with many interesting problems. The liability of the different races of men who differ in colour of their skin, to diseases, in a varying degree, can only be understood from a study of the geographical distribution of diseases among the races of the world and of the history of the many epidemics that overran the face of the earth in the past ages. Ainhum, goundou, sleeping sickness and the filarial affections are confined mainly to the Negro race, but they are insusceptible to

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[1] Diabetes Mellitus. By R. Saundby in Albutts' System of Medicine Vol. III, p. 167.

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yellow fever, malaria and piles. West-Indians and Africans are however susceptible to yellow fever when they return to their countries from a long residence in temperate climates. But in general, they are at all times less liable to violent attacks than Europeans or North Indians. The Negroes are exempt from piles and from varicose veins, and comparatively immune from cancer and syphilis ; they are generally free from gout, the desease of the civilised man. The Dutch are prone to mesoblastic and chiefly vascular degenerations ; and we find the neurotic tendencies of disease as a whole among the French race. These facts can only be verified by the study of the geographical history of the diseases. Clemow says: "A study of medical geography is not complete—and may indeed be misleading—unless supplemented by a study of medical history. Hardly any disease has a permanent geographical distribution. Even those diseases which are practically ubiquitous vary from time to time in their virulence and in the number of their victims. But it is particularly in the large class of 'epidemic' disorders that a study of their history becomes of the greatest interest and value."[1]

The knowledge of the medicinal properties of herbs and roots in the treatment of the sick, the surgical treatment of wounds and the corrections of dislocations or fractures of bones can be traced even amongst primitive nations,—and we can learn the instructive beginnings of the science of medicine.

The study of the history of diseases is an important part of a survey of the present condition of the world. It should be compared with a careful estimate of the past. From scanty materials, the historian is required to reconstruct the earlier ages of human history and to trace the

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[1] Albutt's System of Medicine, Vol. I, p. 113.

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development of medical science of to-day. The student of history who studies the racial peculiarities of diseases, the true origin of epidemics, the influence of heredity, and the natural classification of the morbid conditions, must be skilled men in a very important aspect of medical science which has not as yet received the consideration it deserves—the history and geography of diseases. The importance of the subject should be thoroughly realised especially in England, by virtue of her worldwide dominions. If there be any nation on earth, to which the subject of history of medicine should be peculiarly its own, it is the English who have the best opportunities of supplying the data required for the purpose. Sir George Campbell, one of the late Lieutenant-Governors of Bengal, observed with pride, but without the least exaggeration, at the meeting of the British Association for the Advancement of Science in 1886, "in our vast empire we have every race and every shade, every stage of progress, from the lowest to the highest, every institution and every method of living. As rulers, as explorers, as merchants, as employers of labour, as colonists, we come into the nearest contact with almost every people and every tribe on the face of the earth, we are indeed a people who, if we make but the most moderate use of our opportunities, may bring together such a mass of knowledge as to leave nothing wanting." India as a part of the British Empire has peculiar advantages for the study of the growth of the medical science. "India is in some sense an epitome of the world," and Bengal may be said to be an epitome of India.

V. The study of history of medicine is "a useful pastime for the leisure moments of busy men who take an interest in the history of the profession local or general. Both in England and the United States this has tended more towards the biographical side of medical history,

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and many valuable monographs have been published." Who would not sympathise with the sorrows of Dr. Morton whom Lecky declares in his History of European Moral to have done more for the real happiness of mankind than all the moral philosophers from Socrates to Mill,—the inventor and revealer of anæsthetic inhalation, and who passed the later years of his life in agricultural pursuits, supplying an instance of national ingratitude! His soul rests in peace:

> " Not poppy, nor mandragora
> Nor all the drowsy syrups of the world
> Shall ever medicine these to such sweet sleep."
>
> Shakespeare.

How much Jenner suffered from the incredulity and ridicule of, and direct and determined oppositions from, the various members of the profession who stigmatised his innovation as "a gross violation of religion, morality, law and humanity." Antiseptic surgery has robbed operation of its after-complications, as anæsthetics have averted and annuled pain of the surgeon's knife, but it took years of patient toil to gradually eliminate fallacies and establish and teach the conditions of success. None who have not read Lister's early contributions, and the literature they called into being, can realise the difficulties that he had to overcome, in his epoch-making work on Hospitalism and Wound Treatment. The remark of the butler, who found Simpson lying in his room apparently unconscious, " He'll kill himself yet wi'tha experiments," gives us a graphic account of the hardships and perils incurred in his endeavour to make the severest surgical operations painless. Yet in 1839, only seventeen years before this great discovery, Velpeau said : " All research for an agent to destroy pain in operation is a mere chimera and unworthy of further considerations." It is no doubt interesting to learn that such an eminent benefactor of men, as immortal Harvey, after his celebrated book on the "Circulation of the Blood" came out, "fell mightily in practice ; 'twas believed by the vulgar that he was crack-brained, and all the physicians were against him." As recreation, busy practitioners should study the biographies of the medical worthies. It has been said that Professor Osler's recreation is bibliography.

As a relief to the pressure of learning, the doctor should turn to literature and the arts, especially to drawing and other extra-professional pursuits. From a study of the biographies of celebrated medical men, we may form an idea of the different lines adopted by them as their hobby. It is a mistake to suppose that medicine is a mere mechanical training. The training in medicine is a liberal education. It develops a man's powers in whatever directions those powers are later to be utilised.

As a 'side line,' physicians have derived personal pleasure, and secured benefit to humanity from cultivation of fascinating diversions, entirely different from those required in their daily vocations. We should remember that Apollo was god of healing as well as leader of the Muses. Avicenna became the "Father of Geology" and Linnæus, the "Father of Modern Botany." Stenson revelled among fossils, Auenbrugger and Boerhaave cultivated music ; Henle played the violin. Many embellished literature. Haden, Fridenburg and others have distinguished themselves as exponents of etcher's art. William Hunter, Scarpa, Henry Thompson, and Shrady found joy in painting pictures. Canon Arnot, like St. Luke, entered the ministry. Dr. W. T. Grenfell became celebrated as "Grenfell of Labradar." Keats, Goldsmith and Bridges became celebrated poets. Lord Elkerston (formerly

Dr. Walter Foster), Dr. Jameson (Dr. Jim, the Premier of the Dominion of South Africa), Sir George Robertson (the hero of Chitral), Dr. George Ernest Morrison (the official political adviser of the President of the Chinese Republic), Bayol (the Honorary Colonial Governor), Dr. E. R. Taylor (the Mayor of Sanfrancisco during the most perilous times) celebrated themselves as doctor-politicians. Sir Seymour Haden (President of the Royal Society of Painter Etchers), and Mr. Henry Tonks (Asst. Professor at the Slade School of Fine Art) are instances of doctor artists. Sir Charles Wyndham became an acknowledged head of the dramatic profession.

Sir Joseph Hooker (the Director of Kew Gardens) and Professor Huxley began their career as naval surgeons and became eminent men of science. Dr. Harvey W. Weley was the great chemist who denounced the food adulteration and the selling of spurious soil fertilisers as a crime. Dr. Alexander E. Bell became famous as the inventor of Telephone, that is, for the creation by means of the voice of undulations in an electric current. Livingstone, Mungo Park, Kirk, Rae and Emin Pacha are well-known as explorers. Mr. Stephen Paget acted as the Secretary of the Research Defence Society and so did incalculable good to the cause of science. These eminent physicians have writ their names large in the history of medicine. Many have been enthusiastic photographers. Some have interested themselves in collection of prints, microphotographs, books, and coins. Many devoted themselves to horticulture, floriculture, agriculture and cultivation of plants. Many medical men have gone into the breeding of high grade dogs.

VI. A study of the history of a science helps materially in the formation of character. When students leave their colleges and hospitals, the young graduates are

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imbued in their mind with an idea that their education is complete. But if they realise the greatness of intelligence of the worthies of the past and their share in the progress of science, the effect would be "to modify their estimation of self," and to "help to encourage that modesty of bearing which is ever a noble feature in the perfect character of all great and good men."[1] "I often think we are too apt, in the preoccupation of the present, to forget what a great amount of work was accomplished by our predecessors and how completely, in many instances, they fashioned the pathway which has led to many of our modern achievements. Only to mention the honoured name of Celsus, we find several of the operations described by him are still performed, and he has recorded his experience, or rather the experiences of his time, with a force and precision that never probably have been surpassed. Some perhaps may say, "What have we to do with ancient surgery? We are practical men; give us the surgery of the present day." But much of the practice of the present is founded on the labours of the past, on the thought and the toil of those who are no more:

Vergiss die treuen todten nicht.

There is some tendency to displace the leaders of the generations who have gone before from the pedestals on which the admiration of their contemporaries has placed them. The traditions of the past are, I suppose, a part of the discipline of the surgical mind."[2]

"Above all, he will have learnt from the lessons of the past the one great truth that, however important a discovery he may imagine he has made, it behoves him to be modest in the face of what has been done before him." [1] It is highiy necessary for a physician to practise self-control and to be of firm and genial manners.

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[1] Knaggs, Lancet, 1893, Vol. II, p. 1425.

[2] An Address on the Old Surgery and the New, Sir W. Mac Cormac, F.R.C.S.; B.M.J. 1888, Vol. II, p. 865.

The spirit of disdain for the thoughts and beliefs of the ancient masters of medical science may deprive the future generations from the delight in tracing the growth of the science—a subject which may prove of intense interest to the medical profession.

The study of biographies has been used from time immemorial as an aid to the formation of character by stamping on the minds of students moral impression along with interesting ideas.

Idle pretence of superior success, haughty assumption of power of the instruments of precision for diagnosis and treatment, foolish confidence in vague statistical reports, are unworthy of the graduates of medicine. Be honest and straightforward. Then let the future take care of itself. It is neither always safe nor desirable to discard our old weapons as rusty and futile. Always remember that our present position is the outcome of the struggle of the different schools of medicine, the dogmatists, the empirics, the methodists, the galenists and a hundred other sects. It often happened that one theory was loudly proclaimed as excellent until another just as fallacious had arisen to overthrow it.

"It appears to me," says Adams, "that, at certain periods of ancient times, the standard of professional excellence was such as would not easily be attained at the present day, with all our vaunted improvements in knowledge; and that many of those early masters of our art were distinguished for varied stores of erudition, an ardent love of truth, and an aptitude to detect the fallacies of error, such as few of us even now can lay claim to. The Father of Medicine held that, to become an eminent physician, it was necessary not only to be well acquainted with the structure of the human frame, but also to be skilled in logic, astronomy, and other sciences (De Aer. Aq., etc.); and of him it may be truly asserted, that he cultivated the art of medicine upon the strict principles of the inductive philosophy more than two thousand years before the world gave Lord Bacon the credit of introducing this method of philosophising. His devoted admirer and follower, Galen, was evidently the very *beau ideal* of an accomplished physician; skilled in all the sciences of the day, in logic, mathematics, rhetoric, and the first philosophy; to all these ornamental branches of knowledge he added a minute acquaintance with anatomy and physiology; a practical experience with the phenomena of diseases as diversified by climate, situation, and the varied modes of life; a singular perseverance in collecting facts; and an extraordinary ability for generalizing them. The contemporaries of Celsus regarded him not only as well acquainted with medical literature, but also as being minutely skilled in every elegant and useful science which was known and cultivated at that remarkable period. And Rhases, the Arabian, requires of him who aspires to eminence in the medical profession, that, instead of wasting his earlier years in frequenting musical and drinking parties, he should have spent them in conning over the valuable records of ancient wisdom. "But the Sciolist," says he, "who gives himself out for a proficient in the art, while he has scarcely even a smattering of learning, will never be deserving of much confidence, nor ever attain any great eminence in his profession. For it can never be that any individual, to whatever age he may reach, should be able to comprehend in his mind a subject so vast and diffuse, except by treading upon the footsteps of the ancients; since the boundaries of the science far exceed the narrow limits of the life of man, as is the case with most of the liberal arts as well as with medicine. The number of authors is not small by whose labours the art has attained its present growth; and yet one may hope to master the monuments of their industry within the space of a few years. Let us suppose that, in the course of a thousand years, a thousand authors had made improvements in the profession; and then a person who has diligently studied their works may improve his mind as much in knowledge as if he had devoted a thousand years to the study of medicine. But, when an acquaintance with former authors is despised, what need be expected from the efforts of a single person? For, however much he may surpass others in abilities, how is it to be supposed that his private stock of knowledge should be at all worthy to compare with the accumulated treasures of antiquity? In a word, he who has never turned over the pages of the ancient physicians, nor has formed to his mind a distinct conception of the nature of diseases before he enters the chambers of the sick, will find that, from ignorance and misapprehension, he will confound one complaint with another, for this obvious reason, that he has come to his task unprepared and uninstructed."[1]

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[1] Sir Felix Semon: Relations of Laryngology, Rhinology, and Otology with other Arts and Science, B.M.J., Vol. II, Sept. 24, 1904, p. 717.

We flatter ourselves that we live in a scientific age and we are scientific men. We smile at the ineptitude which led Harvey's contemporaries to abuse him and scout his discovery, and the Faculté de Médecine de Paris to forbid the introduction of his writings on the circulation of the blood in the medical schools. We pharisaically

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[1] Paulus Egineta: Sydenham Society Edition, Editor's Preface, pp. xi-xii.

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felicitate ourselves that we of the twentieth century are blessed with more receptive minds. "*Tempora mutantur non nos mutamur.*" It is not so long since that Lister had to face a storm of antagonism and abuse, and found himself and his followers involved in long and bitter controversy on the subject of antiseptic surgery, or that the renowned Pasteur was persecuted by the profession, which ultimately profited most by his discoveries.

"Like all really great physicians," says Neuberger,[1] "Hippocrates was far from shutting his eyes to the history of medical art, far from despising, in blind over-estimation of his own powers, the work of his predecessors, because it may have been faulty. In *Ancient Medicine* he writes: 'I do not say that the old art of healing should be abandoned as of no account or as though its investigations were wrongly conducted; on the contrary, I maintain that its way of thinking came so near to truth that one should take it more into consideration and wonder at the discoveries made inspite of so great a lack of knowledge.' These words, which even to-day may be laid to heart, demonstrate, not alone the reverent disposition animating the master, but also the motive of that magnanimous action by which Hippocratism restored the discredited art of ancient days to its rightful position."

"The first deficiency noted by Lord Bacon, in his review of medicine," says Russel,[2] "is 'the discontinuance of the ancient and serious diligence of Hippocrates, which used to set down a narrative of the special cases of his patients, and how they proceeded, and how they were judged by recovery or death.'[3] 'This, in fact,' wisely writes Dr. Adams,

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[1] Neuberger: History of Medicine, Playfair's Translation, p. 130.

[2] Russel: History of Medicine, p. 55.

[3] Of the Proficience and Advancement of Learning. By Francis, Lord Verulam. Edited by B. Montague, Esq., 1838, p. 171.

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'constitutes the great superiority of the ancient *savants* over the modern, that the former possessed a much greater talent for apprehending general truths than the latter, who confine their attention to particular facts, and too much neglect the observation of general appearances. I trust no one will be offended if I venture to pronounce, regarding the present condition of our professional literature, that (to borrow an illustration from the logic of Kant) it is altogether cyclopic—that is to say, it wants the eye of philosophy; for although we have learned to examine particular objects with greater accuracy than our forefathers did, the sphere of our mental vision, so to speak, is more confined than theirs, and cannot embrace the same enlarged views of general objects." [1]

Listerism has revolutionised the ancient art of healing as regards the method of wound-treatment, but surgeons are often dogmatic as to the exact method of dressing a wound. Treves and Hutchinson remark [2]: "All surgeons endeavour to secure that the wound shall be quite clean; shall be aseptic; shall not be irritated; shall be kept at rest. One surgeon accomplishes these ends in one way, another in another, and the results are equal. He who considers that his method of dealing with a wound is the most perfect will find that his neighbour, who adopts very different details, obtains an identical measure of success.

"New antiseptic agents appear from time to time upon the scene. They are persued, are vaunted as perfect, are diligently employed, and then not a few of them fade away, some very gradually, others with the suddenness of the South Sea Bubble."

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[1] Adams' Hippoc., p. 232.

[2] A Manual of Operative Surgery: Treves and Hutchinson; Third edition, p. 83.

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"The merely scientific physician," says Dr. Clifford Albutt (a celebrated English authority on Medicine), "is apt to be blind to useful manœuvres which rest rather upon the accidental than the more permanent qualities of things." And he continues—"Prevalent opinions, though not formal truths, contain truths, and this the practical physician does not fail to perceive; nor does he forget that the observations of any person, however profound, being the observations of an individual of brief life and limited faculties, need some tampering by traditional lore—by the embodied opinions of a vast number of observers over a long period of time."

Let us consider the utility of the study of the Hindu system of medicine:

I. *Origin of Medicine*: (*i*) *Gods.*—The Āyurveda which forms a part of the Vedas is considered to be of superhuman origin and to have existed from eternity.[1] Though an Upaveda, the science is considered to be co-existent with the "First Teacher" who is the primary cause of the whole universe. The Āyurveda declares Brahmā to be the source of all knowledge in medicine as in other sciences. Indeed he is said to have composed the original Āyurveda in a lakh *slokas* or verses. In the earlier epochs of the Vedas only universal deities were, more or less, in relation with medicine and disease: as the Aśvins, Rudra and other gods. But later on there were deities with definitely medical functions or pest-gods.

It is from God physician derives his light,—it is on Him he calls for succour. The origin and cessation of life manifest His power. Without help from God, no

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[1] सोऽयमायुर्वेदः शाश्वतो निर्दिश्यतेऽनादित्वात् स्वभावसंसिद्धलक्षणत्वाद्भावस्वभावनित्यत्वाच्च ।

Caraka Saṁhitā, I. xxx.

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physician can be successful. Therefore the ancient Hindus regarded medical science to be of divine origin.

Russel says[1]: "The Divine Founder of our Faith appeared not only in the character of a preacher, or prophet, but very conspicuously in that of a Healer, or, in fact, of a *Medical Man*,—we use the expression with all reverence. One of his apellations, that of Saviour, is translated into German, by the word Heiland, or Healer; and to the common eye of the time, his work was the curing of the sick. Most of the deeds recorded of Him in the Gospels, were instances of the restoration of health or life. That this was the impression made upon his contemporaries, appears from the letter, written by King Abargus, of Arabia, and translated out of the Syriac language by Eusebius." [2]

(*ii*) *Animals as Instructors of Medicine.*—In certain cases, the lower animals were the preceptors of men in matters of selecting food-stuffs and medicinal drugs.

This veiw is also found current in other countries. Schmiedeberg thinks that man has imitated the habits of animals in the detection of remedial agents. It is said that the successors of Mercury, the father of medicine in Egypt, learned the process of venesection from the hippopotamus which is said to perform the operation on itself by striking the leg against a pointed reed, taking care to direct the stroke against a vein.

"Heated animals refresh themselves in cold water, warm their stiffened limbs in the sun, and destroy irritating parasites. Cats and dogs lick their wounds; dogs eat grass to excite vomiting. A dog with a broken bone runs on three legs holding the broken one so that it may set without appreciable shortening ; monkeys seek to check the flow of blood by application of the paw, and are adept in the extraction of foreign bodies, such as thorns......... Cases of mutual help are seen particularly in animals living a social life, such as bees and ants, the latter of which care for their wounded.........It is related that the Egyptian Ibis uses the beak for self-administration of enemata ;.........swallows to heal sore eyes, employ the juice of celandine ; bears to cure stomach disorders, leaves of arum ; tortoises use, as antedote to snake-bite, a variety of origanum ; stags cure their wounds with leaves of dictamnus, etc. In India, where the bitter root of ophiorrhiza mungo is esteemed as an antidote to snake-bite, the lesser ichneumon is designated by the natives as the animal from whom its qualities were learnt." (Neuberger.)

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[1] Russel: History and Heroes of the Art of Medicine, pp. 71-2.

[2] The Ecclesiastical History of Eusebius Pamphilius, translated from the Greek by the Rev. C. F. Crusé, A. M., p. 32.

The story of Polydius who cured Glaucus, son of Minus, King of Crete, from snake-bite, by observing how a dead snake was vivified by another, is another example, but unfortunately the narrator has forgotten to inform us of the name of the herb.

Let us consider the medical attainments of animals as described by Pliny : " The hippopotamus has even been our instructor in one of the operations of medicine. When the animal has become too bulky, by continued overfeeding, it goes down to the banks of the river, and examines the reeds which have been newly cut ; as soon as it has found a stump that is very sharp, it presses its body against it, and so wounds one of the veins in the thigh ; and by the flow of blood thus produced, the body, which would otherwise have fallen into a morbid state, is relieved ; after which, it covers up the wound with mud.

" The bird, also, which is called the Ibis, a native of the same country of Egypt, has shewn us some things of a similar nature. By means of its hooked beak, it laves

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the body through that part by which it is especially necessary for health, that the residuous food should be discharged. Nor, indeed, are these the only inventions which have been borrowed from animals to prove of use to man. The power of the herb *dittany,* in extracting arrows, was first disclosed to us by stags that had been struck by that weapon; the weapon being discharged on their feeding upon this plant. The same animals, too, when they happen to have been wounded by the *phalangium,* a species of spider, or by any insect of a similar nature, cure themselves by eating crabs. One of the very best remedies for the bite of the serpent, is the plant with which lizards treat their wounds when injured in fighting with each other. The swallow has shown us that the *chelidonia* is very serviceable to the sight, by the fact of its employing it for the cure of its young, when their eyes are affected. The tortoise recruits its powers of effectually resisting serpents by eating the plant which is known as *cunile bubula;* and the weasel feeds on *rue,* when it fights with the serpent in pursuit of mice. The Stork cures itself of its diseases, with *wild marjoram,* and the wild boar with *ivy,* as also by eating *crabs,* and, more particularly, those that have been thrown up by the sea.

"The snake, when the membrane which covers its body, has been contracted by the cold of winter, throws it off in the spring, by the aid of the juices of *fennel,* and thus becomes sleek and youthful in appearance. First of all it disengages the head, and then it takes no less than a day and a night in working itself out, and divesting itself of the membrane in which it has been enclosed. The same animal, too, on finding its sight weakened during its winter retreat, anoints and refreshes its eyes by rubbing itself on the plant called *fennel,* or *marathrum;*

but, if any of the scales are slow in coming off, it rubs itself against the thorns of the *juniper*. The dragon relieves the nausea which affects it in spring, with the juices of the *lettuce*. The barbarous nations go to hunt the panther, provided with meat that has been rubbed with *Aconite*, which is a poison. Immediately on eating it, compression of the throat overtakes them, from which circumstance it is, that the plant has received the name of *pardalianches* (*pard-strangler*). The animal, however, has found an antidote against this poison in human excrements; besides which, it is so eager to get at them, that the shepherds purposely suspend them in a vessel, placed so high, that the animal cannot reach them, even by leaping, when it endeavours to get at them; accordingly, it continues to leap, until it has quite exhausted itself, and at least expires: otherwise, it is so tenacious of life that it will continue to fight, long after its intestines have been dragged out of its body.

"When an elephant has happened to devour a chameleon, which is of the same colour with the herbage, it counteracts this poison by means of the *wild olive*. Bears, when they have eaten of the fruit of the *Mandrake*, lick up numbers of Ants. The stag counteracts the effect of poisonous plants by eating the *artichoke*. Wood pigeons, jackdaws, blackbirds, and partridges, purge themselves once a year by eating *bay* leaves; pigeons, turtle-doves, and poultry, with *wall pellitory*, or *helxine*; ducks, geese, and other aquatic birds of a similar nature, with the *bulrush*. The raven, when it has killed a chameleon, a contest in which even the conqueror suffers, counteracts the poison by means of laurel."[1]

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[1] Pliny: Quoted in Curious Creatures in Zoology. By Ashton. Art.—Animal Medicine, p. 160,

In the Vedas, the medical knowledge is often said to be derived from the actions of animals. In the Atharvaveda, we find the animals acting as teachers of medicine. The boar, ichneumon, serpents, eagles, falcons and birds, oxen, kine, goats, sheep, and wild animals are mentioned as versed in the qualities of medicinal plants (viii. 7, 23-26). In Av. v. 13. 9, the eared hedgehog is said to have disclosed some medicine. In the prayer to the remedy for takman (fever) we find: "An eagle found thee, a wild boar uprooted thee with his snout."

II. From the study of Sanskrit medical books we get accounts of some obsolete customs, which were unknown to any other countries in ancient times, and which are difficult to comprehend in modern ages.

(*i*) *Viṣa-Kanyā or the Poison-girls.*—It was the custom in Ancient India to send poison-girls as presents to rival kings, who are said to have met death by their loving caresses and embraces. In the Suśruta Saṁhitā,[1] the physician in attendance on kings are cautioned against such poison-girls who are said to have been sent by enemies to murder the reigning princes:—

विषकन्योपयोगाद्वा क्षणाज्जह्यादसून्नरः ।
तस्माद्वैद्येन सततं विषाद्रक्ष्यो नराधिपः ॥

We find a reference to it in the Devi Purāṇa[2] where men are cautioned against the embraces of the poison-girls.

न चाविज्ञातशीलासु स्त्रीषु भोग्यागमः कचित् ।
विषकन्याभयं घोरं पापजं श्रुयते परम् ॥

In the Mudrā Rākṣasa, we find a similar reference, where a rumour is said to have been circulated by Cāṇakya.

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[1] Suśruta Saṁhitā, V. I.

[2] Devi Purāṇa, Ch. IX.

to the effect that Rākṣasa had the poor Parvataka killed through a poisonous maid [1] :

अत्र तावद् वृषलपर्वतकयोरन्यतरविनाशेनापि चाणक्यस्यापकृतंभवतीति विषकन्यया राक्षसेनास्माकमत्यन्तोपकारि मित्रं पर्वतक इति सञ्चारितो जगति जनापवादः ।

In the Hitopadeśa this story also occurs. It is said that the damsel was so venomous that flies alighting on her body while in perspiration instantly perished.

There is evidence that kings in ancient times tried to discover antidotes by making experiments with poisons upon criminals. Mithradates VI, Eupator (120—63 B.C.), the learned King of Pontus found out a panacea—the famous antidote, Mithradation, for all kinds of poisons. By increasing its use, he is said to have immunised himself against poison. Similarly these poison-girls habituated themselves by increasing their dosage of poison which they began to take from their infancy. They rendered themselves immune to poison but the emanations from their bodies became highly poisonous to others.

In Aristotle's "Secretum Secretorum,"[2] we find a curious reference to this practice of Indian kings—namely the murder of their rivals by means of maids with a poisonous body, whose contact is said to have proved fatal: "Alexander, do not entrust to women the care of the body, but if need be, only to one whom thou hast tried and found devoted to thee and to thy happiness. For thou art like a trust in their hands. Beware of deadly poison, for kings have been killed by them aforetime. And do not confide unto one man the healing of thy body, for one man can easily be seduced; and when it is possible for thee to have ten physicians, do so; do not

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[1] Mudrā Rākṣasa, Ch. I.

[2] Aristotle's Secretum Secretorum, Book II, para. 35.—Translated by Mr. Gaster in J. R. A. S., p. 727.

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follow any prescription, unless they have all come together and are of one accord. And let no medicine be prepared for thee except in the presence of them all, and joined with them one of thy trusted faithful servants, who knows the properties of drugs, their combination and proportions. Remember what happened when the King of India sent the rich gifts and among them that beautiful maiden whom they had fed on poison until she was of the nature of a snake, and had I not perceived it because of my fear, for I feared the clever men of those countries and their craft, and had I not found by proof that she would be killing thee by her embrace and by her perspiration, she surely would have killed thee." Lord Bacon also remarks[1]: "And there is an old tradition of a maiden that was fed with napellus; which is counted the strongest poison of all vegetables, which with use did not hurt the maid, but poisoned some that had carnal company with her."

(*ii*) *Śūka-doṣa.*—The Āyurvedic system of medicine which consists of eight divisions, has a section on Vājīkaraṇa. It treats of the science of promoting the virile power, and notices many customs which, fortunately for the world, have ceased to exist. It is said that the people had recourse to many obscene practices to fatten and strengthen the organs of copulation. One of these methods, according to Vātsyāyana, was the application of Śūka, an unknown kind of poisonous water animal, to the penis to increase its size and strength. As the result of this immoral practice, the organ became the seat of many pathological malformations and it fell to the lot of the surgeons to treat such cases. They describe no less than eighteen kinds of morbid phenomena, some of which are said to be not amenable to treatment.

The disease Impotency seems to have been known

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[1] Natural History, Ch. V, 499, Vol. II, p. 139.

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in the Vedic times, for in the Rv. (i. 116. 13 ; 117, 24 ; vi. 62. 7 ; x. 39. 7 ; 65. 12) Vadhrimati (*lit.* having an impotent man as a husband) seems to be the name of a woman who owed the restoration of her husband's virility to the Aśvins, and obtained a son, Hiraṇyahasta. The word is, however, possibly only descriptive. The hymn Av. iv. 4 is a charm to promote virility. The plant dug up for Varuṇa, shall make him full of lusty strength. It will stiffen the *pasas* as a bow. The strength of the horse, the mule, the goat and the ram shall come to him (Av. iv. 4. 8).

The use of aphrodisiacs to promote virility in man is a special feature of Āyurvedic medicine ; and this practice seems to have been known from time immemorial in India. The plant used is called *kapikacchu* (macuma pruriens) the cowitch. Its seeds are described as powerful aphrodisiac. This plant is dug up by Gandharvas for Varuṇa. The plant makes the organ so very full of lusty strength, that when excited, the patient will exhale heat. It infuses lusty force into men. It stiffens the *pasas* as a bowstring upon the bow.

The practice of applications of various substances to give tone to the organs of copulation was in vogue in many countries in ancient times, and still prevails in certain lands, as will be known from the study of the " Pathologica Sexualis."

(*iii*) *Temple-sleep.*—In ancient times, the temples of gods offered asylums for patients suffering from diseases, as in the present time, in India, when patients suffer from incurable maladies, they often go to some celebrated temples to get their diseases cured by divine aid. These temples offered suitable opportunities of examining patients, of watching the results of methods of cures, of studying the keenly observed by the positive Greek mind, and the results of these more natural methods quickly distinguished from those of priestly ritual. Thus medicine found its place as a branch of natural knowledge, a place which, after Galen, the last of the great Greek physicians, it lost again till the coming of Vesalius and Harvey." [1]

"Of the part taken by priests in the cure of disease we know little precisely, but much may be supposed. By pomp, splendour and ancient enchantments the senses were captured, and the springs of nervous energy unsealed; sorceries and impostures, which are apt to find their way into all great rituals, entered more or less into their system. And of such inspirations and suggestions the physicians may have availed themselves, directly or indirectly; it is alleged that mesmerism was a potent means in the hands of the priesthood. That patients were subjected to hypnotic suggestion we know with some fulness. In the age of Hippocrates it is probable that even the most sceptical inquirers harboured some belief in the supernatural origin of dreams; it is certain that dreams took a considerable part in the treatment of the sick, and that their value as means of "suggestion" was recognised down to the time of Galen. "Incubation" or "temple-sleep" was practised in the Greek temples as in the Egyptian, under the hands of the priests. In the fatal illness of Alexander his generals had recurse to it on his behalf. Incubation was by no means peculiar to the temples of Asclepius; it was practised at many other shrines; as of Apollo, Aphrodite, and Hera. The suppliants in crowds—the sexes were not segregated—their imaginations previously exalted by imposing rites, lay for sleep in the sanctuary by night. If, as we hear,

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[1] Albutt: The History of Medicine, in 'A System of Medicine' by Albutt and Rolleston, Vol. I, p. 2, 1905.

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effects of remedial agents, and of gaining experience by the temple-archives, wherein were written the histories of diseases. Such temples existed in Greece and her colonies: at Cyrene, Crotona, Rhodes, Cos, and Cnidos where the Asclipiads or the temple physicians practised their profession with renown in the earliest times. At Pergamus, a town in Asia Minor, the birth-place of Galen, there was a celebrated temple of Æsculapius. Hippocrates belonged to the temple of Cos, and Dhanvantari taught surgery at Kāśī. It is from this similarity of names of their birthplaces, and from striking resemblances of the Āyurveda and the Greek Medicine, Haas propounded the theory that Dhanvantari was an adaptation of Hippocrates, and Kāśī of Cos.

"The apotheosis of Asclepius came later, and many temples were raised to him. We have record of about one hundred; those best known to us by their surviving relics were in Cos, Pergamum, and Epidaurus. Recent excavations in Cos have brought to light remains of an Asclepian temple with cells, the base of a statue, and the foundations of a well-house. If Tricca was the most ancient of the medical temples, Epidaurus was the largest, and the mother of many such health-resorts in Greek lands. These Asclepieia, whither, as to hospitals or spas, the sick were gathered together, were situated in places of fine air, pure water, and exhilarating scenery. In or near some of them were medicinal springs. There, besides religious rites, other physical and moral influences—such as the drama, games, social amusements, diet and training, and perhaps, a few drugs—were brought to bear upon the sick in mind or body, as they are to-day at Homburg or Aix-des-Bains. At such resorts the effects of "Airs, waters, and places" and of regimen, as well as those of mental exaltation, diversion, or repose, were

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some were sleepless, the priests took care, no doubt, that they should see visions and hear prophecies nevertheless. Opium, hemlock, and some other sedative drugs were known in ancient times. In the visions the tame snakes kept in the temples played some part, as we infer from the *Plutus* of Aristophanes, from some of the inscriptions at Epidaurus, and from other testimony. Like the Delphic priestess, the priest of Asclepius also may have kept himself informed of the private concerns of the suppliants, at any rate of the more eminent of them ; and we ourselves are in no position to denounce this blend of superstition, of the supernatural, and of natural and worldly wisdom, as mere quackery. Indeed, the Apolline religion may be regarded as an Ionian revolt from nature cults, gloomy, obscure, and corybantic, which then, as in other times and places, enslaved the thought and debased the passions of man. We may dwell rather on the therapeutical results obtained indirectly by the preparation for the vigils ; this seems to have consisted in baths, fasting, purgation, anointings, and even bleeding : measures which had their vulgar advantages. On a larger scale, and more persistent method, these trainings, dietetics, mineral and sea bathing, and the like, fell in with the work of the physicians, and with the Greek cult of the body."[1]

"The histories of the cases were recorded," says Russel,[2] "in three different styles ; some were upon votive tablets, others were formal descriptions by literary visitors, and the third were drawn up by the physicians themselves. Of the inscriptions on votive tablets there are but four specimens extant, found on an island in the Tiber. As they are of the highest historical interest, and as we are

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[1] *Ibid*, pp. 3-4.

[2] Russel : History and Heroes of the Art of Medicine, pp. 48-49.

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not aware of there being a version of them in any English work, we shall translate the German one, made by Sprengel, who also at the same place gives the original.

I. 'In these days the oracle spake to a certain blind man of the name of Gajus: he was to go to the altar and to pray, then make a circuit from right to left, lay his five fingers upon the altar, raise his hand and place it upon his eyes. Thus, in the presence of the people, loudly rejoicing, he regained his health. This manifestation of Omnipotence happened under the Emperor Antoninus.

II. 'The oracle spake to the blind soldier, Valerius Aper: he was to come and mix the blood of a white cock with honey, make an eye-salve, and smear his eyes with it for three days. He recovered his sight, and came and returned thanks to the god before all the people.

III. 'Julian appeared to be in a hopeless state after an attack of spitting of blood. The god, by means of the oracle, ordered him to come and take a pine-cone from the altar, and to eat this mixed with honey for three days. He was cured, and came and thanked the god before all the people.

IV. 'The son of Lucius, who lay hopeless with a stitch in his side, was ordered by the god, in a night vision, to come and take ashes from the altar, to mix them with wine, and lay them on the side. He was rescued, and thanked the god before all the people, and the people wished him joy.'[1]

"It will be admitted that, if this be a fair sample of the cures recorded on the tablets, and we have no reason to suppose it is not, it would be about as hopeless to extract trustworthy observations from them as from the columns

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[1] Hundermark. De Incrementes Artis Medicæ per Expositionem Ægrotorum use in Vias Publicas et Templa. 4 to Lips, 1749. Quoted by Sprengel.

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in the newspaper which publish the success of Professor Holloway; nor shall we find anything in the next class of much greater value."

"The most celebrated literary man of antiquity, who describes the proceedings in the temple of Æsculapius, and celebrates the cures there performed, is the orator Aristides. We find him constantly referred to, and we may estimate his fitness for the task by the following specimens taken from one of his orations. Speaking of Æsculapius, he says, 'There are that say they have been raised from death by him.' 'But also some, both men and women, lay to his account that limbs of the body have been given them by the providence of the god, their natural ones having been destroyed.' 'But to me, on the other hand, not a part of the body, but the whole body, having preserved and compacted it together, he himself has given as a gift, just as Promætheus, according to the legend, is said to have formed man.' 'And how extraordinary are the visions he sends! telling some to drink gypsum, some hemlock, some to strip naked and bathe in cold water; me, too, indeed, has he honoured in this way—curing catarrhs by river and sea-baths, and fits of prostration by long journeys; and when I was unable to breathe, ordering me to read and write." [1]

Neuberger[2] says: "Amid the many forms assumed by mysticism the dream-oracles were the chief; they were found mostly in places where the gods had made striking manifestation of their power and presence by strange natural phenomena, *e.g.*, near caves emitting noxious gases; on islands subject to earthquake; in the neighbourhood of hot springs. Many of these oracles acquire medical fame through cures divinely revealed in dreams: among such holy places were

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[1] Aristides Orat. in Æsculap.

[2] Neuberger: History of Medicine, pp. 92, 94, 95.

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Pluto's shrine at Acharaka in Lydia, where the dreams were sent, not to the patients, but to the priests; the miracle-working grotto of Trophonius at Lebadea in Bœotia, and particularly the ancient dream-oracle of the earth-god Amphiaraos at Oropos, which imposed on inquiring patients total abstinence of three days from wine and of twenty-four hours from food of any description. Near to this latter sanctuary was a well whose waters might be used for purification or sacrifice only by those whom the oracle had cured; in such cases it was customary to cast a gold or silver cup into the holy spring, and to dedicate images of the cured members as votive offerings to the god. These and other sanctuaries, however, were not exclusively reserved for the sick, who also might turn to any of the principal gods, Apollo, Artemis or Athene, their prayer for healing help. It was in post-Homeric times that the cult of a special god of healing arose, one whose sole office was the cure of sickness and the preservation of health.

"This was the cult of Asclepios (Σωτηρ, 'Ιατρος," Ορθιος, Παιαν), whose temples formed the chief and latterly the only seats of theurgic medicine, and were held in such estimation that they survived the Olympian fall.

"It is remarkable that the Asclepios cult flourished mostly in places which, through climatic or hygienic advantages, were natural health resorts. Those favoured spots on hill or mountain, in the shelter of forests, by rivers or springs of pure flowing water, were conducive to health. The vivifying air, the well cultivated gardens surrounding the shrine, the magnificent view, all tended to cheer the heart with new hope of cure. Many of these temples owed their fame to mineral or merely hot springs. To the homely altars, erected originally by sacred fountains in the neighbourhood of health-giving mineral springs, were later added magnificent temples, pleasure-grounds for festivals,

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gymnasia in which bodily ailments were treated by physical exercises, baths and inunctions, also, as is proved by excavations, living rooms for the patients. Access to the shrine was forbidden to the unclean and the impure, pregnant women and the mortally afflicted were kept away; no dead body could find a resting-place within the holy precincts, the shelter and cure of the sick being undertaken by the keepers of inns and boarding-houses in the neighbourhood. The suppliants for aid had to submit to careful purification, to bathe in sea, river or spring, to fast for a prescribed time, to abjure wine and certain articles of diet, and they were only permitted to enter the temple when they were adequately prepared by cleansing, inunction and fumigation. This lengthy and exhausting preparation, partly dietetic, partly suggestive, was accompanied by a solemn service of prayer and sacrifice, whose symbolism tended highly to excite the imagination.

"These impressions were deepened by the sight of costly votive offerings for effected cures; the tales of awe-inspiring priests who explained the inscriptions of the temple halls and described many previous miracles, excited greatest hope.

"Thus prepared and raised to a high pitch of nervous tension the patient spent one or more nights in the Hieron, at the foot of great Asclepios' statue, awaiting the healing, god-inspired dream which fancy should weave out of these late solemn experiences. For as in the Amphiarion so in the Asclepion it was in temple sleep that cures were divinely sent (Greek 'εγχοιμησις, Latin, incubatio).

From inscriptions on the temple of Epidauros (with which the burlesque representations of Aristophanes, in his cemedy Plutos, agree) we may gather that in earliest times the god himself effected the cure: *i.e.*, that the priest, masked as the god, appeared by night (accompanied by priestesses posing as Hygieia, Jaso, etc.) and probably assisted by the putative descendants of Asclepios (Asclepiads), who were doubtless in league with the priesthood, actually performed cures which the half-sleeping or half-intoxicated patient imagined to be dreams (binding, anointing, taking or effect of medicines).

In later times Asclepios refrained from these manual services and only indicated the cure, either clearly or symbolically, to the dreamer or his accepted proxy.

The Asclepiads, so-called descendants of the god, severed from the priesthood, or at any rate from its mysticism, ceased to take part in this simple trickery, becoming independent physicians, consenting only at the express wish of patients to carry out the inspired prescriptions.

"In the visions which required to be interpreted by skilled priests (*i.e.*, to be brought into line with their medicinal system) Asclepios enjoined mostly rational cures, such as diet, exercise in riding, hunting, or fencing, also psychical means—listening to a song, seeing a play—less often bleeding or purgatives, at times seemingly ridiculous but really suggestive measures. Success was always ascribed to the credit of the god, failure to the fault of the patient.

"The cured patient was bound to reimburse the priests and their god. In Epidauros Asclepios once himself claimed the fee with the words, 'Thou art healed, now pay the honorarium.'

"In the ancient custom either 'Anathemata' were offered in the form of effigies, gold, silver or marble, of the healed members, or coins stuck with wax on to the thighs of the god's statue, or cast as votive offerings into the sacred spring. In many temples the cures and the means employed were engraved on the pillars or written on votive tablets of wood and stone, and hung up on posts or pillars. In honour of the god festivals were held, Asclepieia by name, consisting of musical competitions."

"There are many things connected with the healing art in which the public mind is better informed than the recognised authorities on medicine. The miracles of healing wrought at the Shrines of Saints, long the objects of scorn and contempt at the hands of the medical profession are now declared to be well within the domain of scientific fact. The miracles of Lourdes, the faith cures at Bethsham and similar phenomena having been subjected to the strictest investigation by the most competent medical authorities, are proved to be not impostures and delusions, but simple matters of fact. Science having reluctantly accepted the Faith-cure now declares it to be "an ideal method since it often attains its end when all other means have failed."

"Its domain is limited; to produce its effects it must be applied to those cases which demand for their cure no intervention beyond the power which the mind has over the body. That is to say faith will cure paralysis and other disorders of motion and sensation, dependent on idea, but does not avail to restore a lost organ or an amputated limb.

Professor Charcot believes that the faith-cure may cause ulcers and tumours to disappear, if such diseases be of the same nature as the paralysis cured by the same means. In all this there is no miracle." He says:—"The diseases are all of hysterical origin; and being merely dynamic, and not organic, the mind has power to influence and cure them. The mind of the invalid becomes possessed of the overpowering idea that a cure is to be effected and it is so." M. Littré thus expresses his opinion on these forms of cure: "*The mind which is most eminently receptive of suggestion, will be the most likely to be influential in curing the body in which it is enshrined by the powerful force of Auto-suggestion.*"

Civilised men, even in modern times, have faith in the potency of religious relics. The following passage quoted from a famous Journal of medicine[1] speaks for itself. "At

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[1] Lancet, Vol. II, p. 518, 1891.

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this season of the year is annually witnessed the sight of thousands of pilgrims to a well-known shrine in the province of Quebec, where heretofore many questionable cures have been wrought through St. Anne, assisted by a fragment of a digital phalanx which once formed a part of that good woman's anatomy. This year a further addition of an "entire finger joint" has awakened fresh interest among "the faithful," while a branch establishment has been started at Perio, on the Gulf of St. Lawrence, where are to be found another fragment of bone and portion of her shoulder. To show that this decaying remnant of mediævalism has still a foothold in Canada, the following is taken from the *Toronto Mail* of Aug. 4th :—"Quebec, 3rd : Yesterday more than eight thousand pilgrims visited the shrine of St. Anne, and a girl named Cote, of St. Paul de Montmapny, who was carried into the church in a lethargic state, lame and dumb, walked away after communicating, apparently perfectly cured."

"In the *Journal de Chimie et de Pharmacie,* Professor B. Dambergis of Athens gives interesting particulars as to the treatment of patients in the Asklepeia of antiquity, especially at the famous shrine of Epidauros. In some at least of the temples the springs were of medicinal character. Analysis of certain of the waters has shown that they are similar in composition and properties to those which are nowadays found to be beneficial in the treatment of gallstones and of disorders of the digestive tract. The old temples of Asklepios were therefore, to a large extent, places to which patients were sent to drink the healing waters and bathe in them : the results are, therefore, by no means wholly to be ascribed to the influence of suggestion or mysticism."[1]

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[1] B. M. J, 1905, Vol II,, p. 458.

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In India, we still find similar temples at Kalighat, Tarakeśvar, Baidyanāth, Benares, and other sacred places, where patients suffering from diseases which have been found to be not amenable to treatment, go in number to get themselves cured. There they bathe and pass through many religious ceremonies, observe fastings, lie for days together prostrate on the ground, and pray for the god's mercy. Generally they get medicines in their hands in their dreams; often they are directed to proceed to some place or to some men to get their medicines. There are authenticated accounts of cures in some cases, though here, as in our medical practice, failures are attributed to the faithlessness, or impurity of patients and are lost sight of, while occasional cures are narrated to patients by the priests in an exaggerated form. Votive offerings made of gold, in the shape of tongue, hands, feet, etc., are often offered to the godess Kālī, when the patients get any relief from distressing symptoms of diseases.

III. *Therapeutic Measures.*—(*i*) "The immovable apparatus" of the Greek and Arabian surgeons, as improved by Seutin, Dieffenback, and others, gives us great advantage in dealing with fractures. We find such methods described in the medical books of the Hindus centuries before they were known to the Greeks and Arabians.

The patent rattan cane splints, recently adopted in the European army, owes its origin to the bamboo splints recommended in Sanskrit medical books, and used by the Hindu surgeons in their practice from ancient times. Many of the ideas re-discovered and appearing from time to time as new and original, can be found to date back to the ancient Sanskrit works on the art of healing, and particularly in surgery. "In my own personal experiences amongst primitive races," says Mr.

Wellcome,[1] "I have sometimes found traces of the origin of what are usually regarded as entirely modern discoveries. Some things have been discovered in remote ages and lost, forgotten, and re-discovered. Some ancient discoveries have continued in use through all the ages. Dr. Reisner, in the course of archæological excavations in Nubia, found some well made bamboo splints, dating, I think, some 2000 or 3000 years B.C. Captain Anderson found similar splints in use in the Southern Sudan some years ago, and I myself have seen them in use in the Upper Blue Nile region. A few days ago in Morocco City, Southern Morocco, I saw exactly similar splints being used, and secured them for this museum. The perpetuity and the re-discovery of ancient devices are exceedingly interesting subjects for investigation."

(*ii*) *Massage.*—Massage is now one of the recognised therapeutic measures useful alike in medical and surgical practice. "The beneficial resutls of such manipulations," says Despard,[2] "were well known to the inhabitants of Eastern countries and ancient documents testify to the fact that massage was practised by them many years before the birth of Christ. We read that at the commencement of the Christian era, as well as antecedent to that time, celebrated Greek and Roman physicians prescribed the treatment for their patients, and that Plato classified the movements as being either active or passive. Massage is known to have been employed on the continent for some centuries, but its practice in England dates only from the beginning of 1800. The present system owes much to Professors Ling, Mezger of Amsterdam, Von Mosengeil, Klien, and others. Professor Ling was a

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[1] Speech by Mr. H. S. Wellcome at the opening ceremony of Historical Medical Museum, p. 23.

[2] Text Book of Massage. By L. L. Despard, London, 1911.

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native of Sweden. He lived 1776—1839, and it was he who elaborated the "Swedish Medical Gymnastic" system and introduced it in Stockholm in the year 1813."

Shampooing or Massage is an oriental Institution and is still in vogue in India. This practice "may be assimilated by every one with benefit. By its adoption circulation is quickened and muscles exercised with a minimum of stimulation of the nervous system. The process is grateful and exhilarating. It is usually at least among Europeans—carried out just after the morning exercise, before taking the bath, and before going to sleep; but when during great heat, the lower extremities ache from a sluggishly-conducted circulation, and there is a sense of weariness, it may be had recourse to with benefit at any period of the day or night. The kneading and rubbing is conducted quickly and vigorously by a servant, called a bearer, from below upwards, until almost every part of the body, anteriorly and posteriorly, has been thoroughly subjected to the process. The legs and arms may be shampooed in the sitting posture; but the recumbent and decumbent positions are needed when the entire body has to be overhauled. The ayah, or female servant, performs this service for European ladies."[1]

(*iii*) *Hypnotism.*—The Hindus at a very early period seem to be acquainted with the obscure phenomena, called Mesmerism at the present day, after its exponent F. A. Mesmer who in 1778, convulsed the civilised world by his wonderful cures of diseases by this mysterious agency. The various modes of procedure employed by the western mesmerists to induce the hypnotic state *viz.*, staring fixedly at an object, gazing steadfastly into

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[1] The Book of Health. Edited by Malcolm Morris: Art.—Health in India, by Sir J. Fayrer and J. Esart, p. 930.

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another's eyes, Luy's revolving mirror, and mesmeric passes,—were known to the Hindus. Various methods are described in the Tantras for throwing a man into a trance by methods similar to mesmeric passes. Prof. Crookes in his Presidential Address at the British Association of Science has admitted that the force manifested in the phenomena of Spiritualism " exists outside our scientific knowledge and is exercised by intelligence differing from the ordinary intelligence common to mortals."

(*iv*) *Exercise.*—Breathing exercises are prescribed in the Yoga systems. This method is well worth trying especially in combination with other therapeutic measures. Dr. Reimers testifies the value of this method of treatment in acute nasal catarrh.[1] He has them carried out regularly two or three times a day, near an open window, and testing in each case for about five or ten minutes. With the exercises he combines simple gymnastic drill, and in many cases the joint treatment results in an increased potency of the air passages.[2]

The following remarks are worthy of notice:— "If Europeans cannot adapt their mode of life to a tropical climate but must indulge in habits totally incompatible with such a climate, they should at all events endeavour to convert their food into wholesome nutriment, and preserve the robustness of their frames by practising athletic exercises, in the cool of the day, and wrestling in imitation of the Puh'lwans. It is indisputable that these individuals enjoy an immunity from disease, unknown by others. There are none whose constitutions resist the exciting causes of disease so well although blood is abundant and their vascular system vigorous. The few

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[1] Med. Klin., No. 5, 1912.

[2] Clinical Excerpts XVI, No. 5, p. 105.

Europeans who have entered thoroughly into the spirit of these exercises return to their native land with vigorous constitutions capable of really enjoying their native country.

"The writer has long admired and practised the calisthenic exercising of the Asiatics, and attributes a better state of health and stamina, and a capability for active pursuits, far superior to that enjoyed by him in England, to a systematic use of these exercises.

"In the Governor General's Body Guard there is a very good specimen of a gymnasium amongst the troopers, some of whom are very well developed athletics, among the old and most respectable hands."

For exercise Mr. Brett thus recommends: "The 'Moogdurs' the 'Dund'h' and the 'Lézum,' are the best kind of exercises for general use in India, though it would be well for a young man to go through the whole system at first under a regular 'Puh'lwan' and afterwards continue the Moogdurs, Dund'h and Lézum in moderation, as a high degree of artificial training may be carried too far; excess even in what is good, is to be avoided. Nothing is so conducive to a perfect capillary circulation, to the healthy action of the liver and of all the secretions, the tone of the stomach and the sthenic state of the nervous and muscular system enabling us to bear up against a long and sultry day. Friction and shampooing should not be omitted."[1]

IV. *Indigenous Drugs.*—There is a mine of drugs in this country. These are easily available and do not cost much. If the indigenous drugs are carefully worked out by men of special training, the result would be

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[1] A Practical Essay on some of the Principal Surgical Diseases of India, by F. H. Brett, Esq., M.R.C.S.L., Bengal Medicial Service. Thacker & Co., Calcutta, 1840.

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productive of great good to the human race. There is a great need for a pharmacological laboratory in Calcutta, where many new drugs possessing a variety of properties may be scientifically investigated with a view to test their efficacy on manifold diseases. The Sanskrit medical books are replete with the names of various medicaments. Such curative agents are still being used by the Āyurvedic physicians with success. The properties attributed to them require to be verified by us, before we accept or discard them in our practice. There are illustrations of the oft-repeated cases of wonderful remedies now most highly vaunted, a short time later discarded as useless, only to be resuscitated at some future date as new discoveries. "By a study of the history of therapeutics, by a knowledge of the vicissitudes of fashion in the use of therapeutical agents, a lesson might be learnt teaching caution in the acceptance of new and much vaunted remedies, which might of themselves be of value, but come to be viewed with suspicion by the more cautious and sagacious members of the profession. Dr. Gairdner rightly deprecated the "booming" of new remedies, but naturally, did not propose the rejection of a remedy because it was new."[1] Dr. Snowman[2] justly remarks : "Amid all that is new, clamouring for trial and all that is old still claiming recognition we may aptly adopt as our line of practice an apposite couplet from Pope :

> "Be not the first by whom the new is tried
> Not yet the last to lay the old aside."

Systematic investigations of the natural vegetable products of India can hardly fail to lead to the utilization of a considerable number of drugs, whose therapeutics are at present unknown to us. In some instances valuable results may be obtained and the commercial and economical value of such investigations is very great.

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[1] B. M. J., Vol. I, 1891, p. 972.

[2] Clinical Excerpts, Vol. XVI, p. 113.

India possesses one of the greatest drug-yielding regions in the world. Her inexhaustible forests include those of all climatic zones between sea level and the upward limit of tree growth. Oil-bearing seeds, valuable dyes, fibrous plants, varnish resins, tropical fruits, tea and its associates, take high rank among the best in the world.

Norman Cheevers thus writes on the subject of the Materia Medica of India in his famous Commentary on the Diseases of India: "This is a subject upon which the Indian physician ought to acquire considerable practical knowledge; but it is a matter which lies outside the object of this commentary. Native medical men and patients constantly speak to us of various native remedies with which we ought to be, at least, acquainted, and several indigenous drugs, such as opium, castor oil, ginger, alum, kat-kalija, atees, gurjun balsam, gulancha, ununtamool, chiretta, bael fruit, babul bark, neem leaves for fomentation, mustard oil for liniments, sola for corks, Madras fish oil, telini fly, etc., are frequently used in our own practice. The medical authorities insist upon the free use of indigenous medicines in dispensary practice; but here it is needful to remark that, if we are not careful to disguise the appearance and flavour of bazaar medicines, our dispensary patients are apt to accuse us of giving them common drugs and of reserving our best medicines for the rich!

"It has occurred to most of us, when our supply of European drugs has run short at a remote station, to be compelled to fall back upon bazaar medicines. When I first went to India, we were allowed very little quinine, and had to use bark-powder in our jail and sepoy hospitals. At Chittagong, my supply of bark having run out, and intermittent fever of moderate severity being extremely prevalent, I used the powder of the seeds of kat-kalija, *Cæsalpinia Bonducella* (average dose, twelve to fifteen grains), in cold infusion of chiretta, for several weeks with perfect success. It is related of Dr. William Pitt Muston that, having under his charge 1,500 sick in the force employed against the State of Gopud in 1805, and being without the usual supply of medicine, he relied, 'and with complete success,' on the materia medica of the Gwalior Bazaar.[1]

"My friend Dr. Waring has brought out three editions of a work which ought to be in the hands of every medical man in India. It is entitled 'Remarks on the Uses of some of the Bazaar Medicines and Common Medical Plants of India,' and is published by Churchill. In this book we are taught, by the highest authority on the materia medica of India, how the drugs commonly procurable in Indian bazaars may, in remote parts of that country, be made sufficient for the treatment of all ordinary diseases if the practitioner be also provided with these *nine* medicines:—Quinine, powdered Ipecacuanha, Calomel, Santonin, Bromide of Potassium, Acetate of Lead, Blistering Fluid, Liquor Ammoniæ, and Carbolic Acid.[2] The means of

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[1] The harm which the absence of mercurials prevented the worthy doctor from doing must not be left out of consideration in estimating the good which the use of bazaar medicines doubtless wrought upon his sick.

[2] The practitioner ought to make his own blistering fluid from the country telini fly, *Mylabris cichorii*; if I had my Indian career over again, I would willingly dispense with calomel and acetate of lead.

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studying this very important subject more deeply are afforded in the Pharmacopœia of India also prepared by Dr. Waring under the authority of the Secretary of State for India; in the learned and most carefully prepared work of my friend Odoy Churn Dutt, on the Sanskrit Materia Medica; and in that great storehouse of Indian pharmaceutical lore, Sir William O'Shaughnessy Brooke's 'Bengal Dispensatory.'[1]

It seems strange that the study of the indigenous drugs, though so important to a physician in India, finds no place in the curriculum of studies prescribed as Syllabus for the Examinations of our Universities. The introduction of the indigenous products of India into European practice in India has not been realised. 'If they are ever to come into general use in hospitals and dispensaries throughout India, it is to the medical colleges and schools that we must look in the first instance. It is there that a correct knowledge of them should be first instilled; that the student should become familiarized with the articles themselves; that he should be made acquainted with their physical characters and medicinal properties; and it is there, during the period of student life, that he should become practically instructed in their employment in the treatment of disease. On the value of knowledge thus gained, it is impossible to place too high an estimate, familiarizing, as it will, the embryo practitioner with remedies which are at hand in the remotest corners of our Indian empire, rendering him in a great measure independent of costly imported articles, and effecting a considerable annual savings to the State."[2]

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[1] Chevers: A Commentary on the Diseases of India, p. 25.

[2] Waring: Pharmacopœia of India, 1868, pp. ix-x.

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I have collected from various sources the following:

Table of Substitutes, useful in the event of any deficiency in the usual Medicines.

Pharmacopœial Medicine.	*Substitutes :—Country Medicine.*
Linseed Poultice	Nuteeya, or Neem-leaf Poultice.
Linseed Meal Poultice	Rice Flour Poultice.
Conium Poultice	Dhatura Poultice.
Mustard Poultice	Get Kuchoo, or Lal Chitra Poultice.
Yeast Poultice	Toddy Poultice.
Cerate of Cantharides	Cerate of Telini Flies.
Decoction of Iceland Moss	Decoction of Gulancha, Ceylon Moss.
Compound Decoction of Barley	Decoction of Oryzæ or Ispaghool.
Decoction of Oak-bark	Decoction of Rohun, Acacia Arabica, Pomegranate Bark.
Plaster of Cantharides	Plaster of Telini Flies, Plumbago Rosea.
Extract of Bark	Extract of Barberry Bark.
Extract of Gentian	Extract of Chiretta, Justicia or Kreat, Gulancha or Palo, Kurroo.
Extract of Liquorice	Extract of Abri or Goonch.
Extract of Logwood	Extract Dyospyri or Gab, Japan wood, Nemooka, Sappan wood.
Extract of Jalap	Extract of Kaladana.
Extract of Poppy	Extract of Hemp.
Infusion of Cusparia	Compound Infusion of Sohunjuna.
Infusion of Gentian	Infusion of Bel, Chiretta, Gulancha, Kreat, Kurroo, Pata, Ununtamool,
Infusion of Ipecacuanha	Infusion of Banopsha, Crini, Kanoor.
Compound Infusion of Linseed	Infusion of Pedalium, or Gokeroo.
Infusion of Serpentary	Infusion of Ajapana.
Compound Gamboge Pill	Pilula Kaladana.
Ipecacuanha Powder	Compound Powder of Mudar.
Syrup of Sarsaparilla	Syrup of Ununtamool or Chobchinee.
Tincture of Catechu	Tincture of Myrobolan.
Compound Tincture of Bark	Tincture of Barberry, Toddalia.
Tincture of Colchicum	Tincture of Hermodactyl or Soorinjan tulk.
Tincture of Cubebs	Compound Tincture of Gurjun.
Tincture of Gentian	Compound Tincture of Chiretta.
Tincture of Jalap	Tincture of Kaladana.
Tincture of Hop	Tincture of Mishme Teeta, Gulancha.
Tincture of Myrrh	Tincture of Mugrela.
Tincture of Opium	Tincture of Hemp, Dhatura.
Ointment of Elemi	Ointment of Gunda Biraza.
Ointment of Nitrate of Mercury	Ointment of Chakoor, Chalmoogra, Compound Cinnabar, Daod murdun, Sal Ammoniac and Borax.
Calamine Cerate	Compound Ointment of Myrobolan.
Resin Plaster	Plaster of Gum Kahrubah.
Fresh Lemon Peel	Dried Lemon Peel (in preparation of Compound Infusion of Orange Peel, Compound Infusion of Gentian, Syrup of Lemon and Tincture of Lemon.)

Pharmacopœial Medicine.	*Substitutes :—Country Medicine.*
Lard	Hard Soap, Prepared Suet, Resin, or Yellow Beeswax (in preparation of the plasters).
Bitter Orange Peel	Indian Orange Peel.
Olive Oil	Arachis Oil or Sesame Oil in preparation of Hard Soap, Liniments, Ointments, and Plasters.
Benzoated Lard	Benzoated Suet.
Oil of Theobroma	White Beeswax (in preparation of Suppositoria), Kokum Butter, for Unguenta.
Mylabris Phalerata (Beetle)	Telini fly and other Species of Mylabris in preparation of Blistering Liquid of Mylabris, Warming Plaster, Mylabris Plaster and Vinegar.
Mucilage of Gum Acacia	Mucilage of Indian Gum.
Gum Acacia, Gum Arabic	Indian Gum, Gum of Wood-Apple Tree.
Catechu	Black Catechu, Gab.
Kino Gum	Butea Gum (Palas).
Calumba	Gulancha, Mara Manzil (Tamil), Coscinum Fenestratum, Trichosanthes Cordata.
Podophyllum Peltatum	Indian Podophyllum.
Horse radish	Root of Morniga Pterygosperma, Sohunjuna.
Male Fern	Pomegranate Root-bark, Kamala.
Officinal Sassafras	Nepal Sassafras.
Barbadoes Aloes	Indian Aloes.
Socotrine Aloes	Barbadoes Aloes.
Siam Gamboge	Indian Gamboge.
Spermaceti Ointment	Kokum Butter.
Copaiba	Balsam Gurjun, Liquid Storax, Sandal Oil.
Pine Resins	Dammar.
Sulphate of Quinine	Karanjwa Powder.
Quinine	Bark of Baobab, Sulphate of Beberia.
Ruta Graveolens	Ruta Angustifolia.
Jamaica Quassia	Bharangi, Kariyat.
Almond Oil	Oil of Java almonds (in Mistura Amygdalæ), or Country almonds.
Myrrh	Gugul.
Burgundy Pitch	Black Dammar.
Cinchona	Bark of Cedrela Toona (Roxb.) Barberry, Atis, Nim Bark, Alstonia Bark, Rohun Bark.
Extract Colocynth	Extract Cassia Leaves, Indrayan.
Galls	Myrobolans (in lotions, injections, etc.) Kakra-Singhi.
Common Fennel	Panmuhuri.
Ipecacuanha	Mudar, Kurchi, Tylophora Asthmatica (in Dysentry) Crinum Juice (Emetic and diaphoretic).
Compound Powder of Jalap	Compound Powder of Kaladana.
Datura Stramonium, Belladonna	Dhatura Abba,

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Pharmacopœial Medicine.		*Substitutes :—Country Medicine.*
Sarsaparilla, Dulcamara	...	Fresh Hemidismus root.
Guttapercha tissue		Young plantain leaf.
Officinal Squill	...	Scilla Indica, Crinum root.
Cod-liver Oil	..	Cocoanut Oil, Shark-liver Oil.
Acacia Catechu	...	Betel Nut Catechu.
Proof Spirit	...	Arrack from Palmyra or Cocoanut Palms.
Santonica	...	Palas Seeds, Juice of Papaya, Mango Seeds, Veronica Seeds.
Serpentaria Root	...	Aristolochia Indica Root.
Oil Cajuput	...	Lemon Grass Oil.
Oil of Lavender	...	Ajwain or Omum.
,, Peppermint	...	
,, Thyme	...	
,, Dill	...	
,, Caraway	...	
,, Coriander	...	
,, Anise	...	
Turkey Opium	...	Patna Opium.
Valerian	...	Valeriana Hardwicki, Nardostachys Jatamansi.
Common Dill	...	Sowa.
Pimento	...	Cloves.
Black Pepper	...	Long Pepper.
Tragacanth	...	Kutira Gum.
Senega	..	Muktajhuri (Acalypha Indica), Bakas.
Aconite	...	Aconite Ferox, Bish.
Ergot	...	Indian Hemp.
Alexandrian Senna	...	Tinnivelly Senna.
Elaterium	...	Croton Oil.
Turkey Rhubarb	...	Himalayan Rhubarb.
Lemon Juice	...	Lime Juice.
Oil of Nutmeg	...	Concrete Oil.
Mezereon Bark	...	Plumbago Bark.
Wine, Brandy, Proof and Rectified Spirit.	..	Mahwa Spirit, Arrack.
Cascarilla Bark	...	Michelia Champaka bark.
Wooden Splints	...	Areca petioles, Bamboo.
Lard	...	Shark-liver Oil.

" While, of course, of the immense number of plants used as drugs by the natives of India, a large number are known to be perfectly worthless, still it must be admitted that our ignorance of the properties and uses of the indigenous drugs is scarcely pardonable. It seems highly desirable that the whole subject should be gone into with greater care than has yet been done, both with the view of weeding out the worthless from the good and of preparing the way for a number of the better class native drugs

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taking the place of some of the more expensive and imported medicines of Europe. It seems remarkable that so large an amount of aconite should be collected in Nepal and exported to Europe in order to be reimported into India before it can find its way to the poor people who crowd around our dipensaries. Illustrations of a similar nature might be multiplied indefinitely ; *Atropa Belladona*, the Deadly Night-shade, for example, is a common weed on the Himálaya from Simla to Kashmir, yet every ounce of the drug used in India is imported from Europe, the Indian plant having apparently been entirely overlooked."[1]

ARTICLES OFFICINAL IN THE PHARMACOPŒIA OF INDIA NOT CONTAINED IN THE BRITISH PHARMACOPŒIA.[2]

Aconitum ferox, *Wall.* Root. Vish.
Aconitum heterophyllum, *Wall.* Root. Atis.
Coptis Teeta, *Wall.* Root. Mishmi Tita.
Tinospora cordifolia, *Miers.* Root and stems. Gulanca.
Berberis Asiatica, *D.C.* ; *B.* aristata, *D.C.* ; and B. Lycium, *Royle.* Root-bark. Rasot.
Narcotine.
Sinapis juncea, *Linn.* Seeds. Rai.
Gynocardia odorata, *R. Br.* Seeds. Chaulmugra.
Garcinia pictoria, *Roxb.* Gum-resin. Indian Gamboge Tree.
Garcinia purpurea, *Roxb.* Oil of the seeds. Kokum Butter.
Dipterocarpus lævis, *Ham.* Balsamic exudation. Gurjun.
Hibiscus esculentus, *Linn.* Capsules. Okra.
Citrus Bergamia, *Risso.* Juice of the fruit. The Lime tree.
Toddalia aculeata, *Pers.* Root. Lopez root.
Boswellia floribunda, *Endl.* Gum-resin. Ganda-biraja.

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[1] Official Report of the Calcutta International Exhibition, 1883-84, pp. 316-17.

[2] Pharmacopœia of India, 1868. pp. xv.-xvi.

Azadirachta Indica, *Juss.* Bark and leaves. Nim.
Soymida febrifuga, *Juss.* Bark. Rahun.
Mucuna pruriens, *D.C.* Legumes. Cowhage.
Acacia Catechu, *Willd.* Extract of the wood. Khadir.
Cæsalpinia (Guilandina) Bonducella, *Linn.* Seeds. Bonduc.
Butea frondosa, *Roxb.* Inspissated juice. Palas.
Abrus precatorius, *Linn.* Root. Goonch.
Arachis hypogæa, *Linn.* Oil of seeds. Ground nut.
Carum (Ptychotis) Ajowan, *D.C.* Fruit. Jowan.
Hydrocotyle Asiatica, *Linn.* Leaves. Penny-wort.
Diospyros Embryopteris, *Pers.* Fruit. Gab.
Punica granatum, *Linn.* Rind of fruit. Pomegranate.
Alstonia scholaris, *R. Br.* Bark. Chatin.
Calotropis gigantea, *R. Br.*; and C. procera, *P. Br.* Root-bark. Mudar.
Tylophora asthmatica, *W. et A.* Leaves. Antamul.
Pharbitis Nil, *Choisy.* Seeds. Kaladana.
Andrographis paniculata, *Nees.* Stalks and roots. Kariyet.
Datura alba, *Linn.* Leaves and seeds. Sādā Dhutura.
Plantago Ispaghula, *Roxb.* Seeds. Isapgul.
Crinum Asiaticum, *Herb.* Bulbs. Kanoor.
Oryza sativa, *Linn.* Seeds. Rice.
Andropogon citratum, *D. C.*; *A.* Nardus, *Linn.*; and A. pachnodes, *Trin.* Volatile oil. Gandha bena. Kamákhér.
Gracilaria lichenoides, *Greville*, and other species. Dried plant. Ceylon Moss.
Mylabris Cichorii, *Fabr.* Dried insect. Telini Fly.
Squalus Carcharias, *Linn.* Oil obtained from the liver of the White Shark.

V. *Identification of Diseases:* A study of Indian Medicine may lead to a better identification and description of such diseases as are unknown or uncommon in Europe.

(*i*) Let us take the example of Leprosy. We find the various forms of the disease in its different stages, more commonly in India than elsewhere. The disease is fully described in Sanskrit books. So it is important that we should study the Sanskrit medical works with an open mind, ready to accept their experience, their description of the disease and their alleged methods of cure; we should have as our motto:

"Prove all things, and hold fast what is good."

In the Review of "The Transactions of the Medical and Physical Society of Calcutta, Vol. I.," the Editor of Lancer remarks:[1] "It is probable that the imperfect science of the *Baids* or *Hakeems* of India cannot furnish much instruction to the practitioners of Europe, but liberal and cultivated minds will welcome the light that may be thrown upon the past and present state of oriental medicine, by the labours of the industrious and the learned, whether their information be derived from authentic sources or actual observation. The history of Mahomedan medicine, comprising the most flourishing periods of the schools of Bagdad and Cordova, has been pretty fully elucidated, but fails with the decline of the power of the Caliphs; a long subsequent period in this branch of inquiry is therefore involved in obscurity, and the medical history of the Hindus in an utter blank. In these respects, therefore, there is ample scope for investigation, which may be prosecuted with every advantage in the country in which the Society is with so much judgment established. To the oriental nations we owe the introduction of many simples into medicine, which were unknown to the Greeks and Romans, such as manna, senna, tamarinds and rhubarb, besides musk, nutmegs, cloves, etc.; and in modern times, the madar, croton oil, etc. Hence it is not improbable, that many valuable remedies may yet be culled from the Materia Medica of the East; but if no accessions of value be derivable from that source, a vast store of knowledge, important equally to physiology and pathology, may be collected and rendered subservient to the healing art. That much may be done, is proved by the present volume of transactions, which, although the Society has been so recently established, contains many papers of sterling value, of these we shall now proceed to give some account. The first is an elaborate dissertation on "*Kushta*, or Leprosy, as known to the Hindus," by H. H. Wilson, Esq. This formidable and loathsome disease, as it occurs in India, is well adapted for medical research, as its nature is uncertain, and its treatment undefined. The talent of Europe has been baffled by the want of experience, which nothing but actual observation can convey. There is an ample field, therefore, for the Indian observer, who has numerous opportunities of examining the disease under all its forms, and in all its stages. Under these circumstances, we trust this Society will remove the reproach to medical science, and indeed it is a reproach, that so little is known of the subject."

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[1] Lancet, Vol. X, p. 133, 1826.

"We are indebted," says Brett,[1] "to the Hindoos for almost every efficacious remedy in this disease." He makes selections from numerous compounds mentioned in Sanskrit books. These have been tried by many able European practitioners in India, and their efficacy rests on the most unquestionable authority.

In India, the Chaulmoogra oil has long been used externally by the Āyurvedic physicians from ancient times.

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[1] F. H. Brett. A Practical Essay on some of the Principal Surgical Diseases of India, 1840.

The fruit and seed have also been used internally in leprosy.

Sandes[1] of Robben Island is satisfied that chaulmoogra oil is superior to any other known remedy or reputed cure of leprosy. The oil is not successful in every case—it certainly cannot be called a specific. But he is satisfied that 40% patients improve under the treatment. The oil should be given for five years or more and in the largest possible doses. Engle Bey has prepared for him 'antileprol,' a purified form of the oil. He found benefit from its use in many patients. The researches of Sir Leonard Rogers prove that Sodium Hydnscarpate (Sodium Gynscardate A) is a highly useful remedy in Liprosy.

(*ii*) *History of Cholera.*—The modern history of Cholera begins from 1817 when it appeared in Jessore and soon ran its pandemic course within two years over the whole world. Since then the disease never entirely disappeared from us—at times it attacks its victims sporadically, at others running as a terrible scourge counting its victims in thousands. But it seems strange that the English physicians considered the disease as a novel one. Had they been learned in medical history they would have known that the disease was known to Celsus in A. D. 262, to Sydenham in 166', and to the Ayurvedic Physicians Caraka and Susruta about 1000 years B.C., who describe it as Visucikā. The Chinese writers (5th century B.C.) mention it as Ho-louan ; Hippocrates speaks of it as χολερη. The Arabic physicians applied the term Haiza to cholera, and this word is in common use in India at the present day.

Fayrer[2] says : "There is abundant evidence to show that the disease has been well known and described since the very earliest periods of history, nor is there anything in this record to prove that its origin is to be traced to India alone."

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[1] Journal of Tropical Medicine and Hygiene, March 1, 1912.

[2] Natural History and Epidemeology of Cholera, p 11.

Doubts have been expressed as regards the identity of Cholera as we now find it and Visūcikā as described in the ancient Sanskrit writings. In the second Annual Meeting of the Buddhist Text Society, extracts were read from a Buddhist work, where the name Visūcikā occurs. In one case it followed after eating a rotten radish and frequent drinking of foul water on the way; in another, the disease attacked a Brahmin who greedily ate the various dainties that were served at the table. In the discussion that followed, the following supplementary remarks on the disease (*Visúchiká*) referred to above, were made. I quote the remarks here:

" A few passage from the most ancient authorities on Hindu medicine with their literal translation in English, will show that cholera, in the form it now exists, was unknown in ancient Inida.

To quote from *Charaka Vimansthán—Chapter II.*—

"Physicians have divided the disorders of the stomach into two classes, *Visúchiká* and *Alasaka*, according to the condition of the bowels. In *Visúchiká*, there is an upward and downward flow, *i.e.*, a vomiting and purging. When there is excess of wind in this disease, gastrodynia, suppression of urine, bruising pain all over the body, dryness of the mouth, fainting, forgetfulness, loss of appetite, contraction of tendons, and suppression of stools will take place. When bile becomes predominant, fever, diarrhœa, burning sensation of the body internally, thirst, forgetfulness and delirium will supervene. In the case where phlegm is predominant, fever ushered in by chill (ague) *malaise* and heaviness of limbs will be the marked symptoms."

To quote from—*Suśruta Uttaratantra—Chapter 56.*—

" On account of indigestion the wind becomes irritated and produces a painful sensation in the body of the patient like that of the pricking of needles. Owing to this physicians call this disease *Visúchiká—Súchiká* meaning a needle. Men versed in the Śástras, learned people, and moderate eaters seldom suffer from *Visúchiká*. Greedy people, and those who have no control over their desires, get this disease. In *Visúchiká* the following symptoms appear :—Fainting, diarrhœa, vomiting, thirst, gastrodynia, forgetfulness, cramps, yawning, bruising sensation all over the body, discoloration of the skin, shivering pain in the cardiac region, and weakness of the head. If the teeth, lips, and nails of the patient become yellowish-brown ; if there is no sense whatever ; if the vomiting is too severe and eyes sunk into their sockets ; if the voice is very low-pitched and the joints seem to be loose, then there is no hope for his recovery."

According to *Babhata-Sūtrathān Chapter 8.*—

"People, who have no control over their desires, by stuffing their stomachs with unripe and indigestible food, bring on *Alasaka* and *Visúchiká* upon themselves. These are due to the pressing and consequent agitation and irritation of the wind, bile, and phlegm in the stomach. In the latter of the two diseases, the wind being irritated, several kinds of pain, like the pricking of needles, are produced, and hence the name of the disease (*Visúchiká*).

"In *Visúchiká*, where wind is predominant, there is gastrodynia, shivering, suppression of urine and stools. Where there is pre-excess of bile, there is fever, profuse diarrhœa burning sensation of the body, thirst, fainting, etc., etc. In the case where phelgm is predominant, there will be coryza, heaviness of the limbs, loss of speech, and flowing in of saliva."

"From the above illustrations it will be seen that the symptoms of *Visúchiká* do not exactly coincide with the symptoms of Cholera. Dr. Macnamara in his treatise on Asiatic Cholera quoted certain passages from *Suśruta* to establish his view about the Indian origin of cholera, but at last he was doubtful if the description corresponded with the symptoms of the cholera of our age. He observed—quoting from *Suśruta* :—"The patient is attacked with vomiting, purging, faintness, thirst, pain in the abdomen, yawning, forgetfulness, burning heat in the stomach, duskiness of the surface of the body, pain in the head and heart." The worst symptoms are "blueness of the gums, lips, and nails, diminution of the senses, coldness of the body, sunken eyes, suppressed voice, a feeling of complete lassitude ;' but 'if burning of the palms of the hands, and body, accompanied with sharp vomiting" occur, the patient is likely to recover ; and 'should he digest his food all danger is passed,' the patient obtaining immediate relief, the purging stops and he is in comfort. If this description refers to cholera, says Dr. Macnamara, 'the disease must have been in existence for many centuries.'

"Dr. Mahendralal Sircar in the *Calcutta Journal of Medicine*, of June and July 1883, proved by indirect evidence, quoting several ancient Hindu and Tibetan authorities on the subject, that cholera was not of Indian origin.

"I must conlude in the language of Dr. Sircar : 'Was *Visúchiká* the primitive parent of cholera ? Is there evolution in disease as there is in animated nature ? This is a question well worth a most careful and searching investigation ; for if solved in the affirmative, it will open entirely a new field for hygiene and therapeutics.'"

N. B.—*Kaviráj* Bijoyratna *Kaviranjan*, a distinguished medical authority of Bengal, is of opinion that *Visúchiká* was a form of diarrhœa, which took the place of cholera in ancient India. He has very kindly sent me the following extracts from *Charaka* and *Susruta* medical works, in support of his views on the subject :—Ed.

विसूचिका ।

तं द्विविधमाम-प्रदोषमाचक्षते भिषजो विसूचिकामलसकञ्च ।
तत्र विसूचिकामूर्द्ध्वञ्चाधश्च प्रवृत्तामदोषां यथोक्तरूपां विद्यात् ॥
तत्र वातः शूलानाहाङ्गमर्द्दमुखशोषमूर्च्छा ।
भ्रमाग्निवैषम्य सिराकुञ्चनसंस्तम्भनानि करोति ॥
पित्तं पुनर्ज्वरातिसारान्तर्द्दाहतृष्णामदभ्रमप्रलपनानि ।
श्लेष्मा तु छर्द्यरोचकाविपाकशीतज्वरालस्यगात्रगौरवाणि ॥
(चरक विमान-स्थाने २याध्यायः) ।

सूचीभिरिव गात्राणि तुदन् सन्तिष्ठतेऽनिलः ।
यत्राजीर्णेन सा वैद्यैरुच्यते तु विसूचिका ॥
न तां परिमिताहारा लभन्ते विदितागमाः ।
मूढास्तामजितात्मानो लभन्तेऽशनलोलुपाः ॥
मूर्च्छातिसारौ वमथुः पिपासा शूलं भ्रमोद्वेष्टन-जृम्भनदाहाः ।
वैवर्ण्यकम्पौ हृदये रुजश्च भवन्ति तस्यां शिरसश्च भेदः ॥
यः श्याव-दन्तौष्ठ-नखाल्पसंज्ञो वम्यर्द्दितोभ्यन्तर-जात-नेत्रः ।
क्षामस्वरः सर्व्वविमुक्तसन्धिर्यायान्नरोऽसौ पुनरागमाय ॥
(सुश्रुतस्योत्तर-तन्त्रे षट्पञ्चाशदध्यायः)

पीड्यमाना हि वाताद्या युगपत्तेन कोपिताः ।
आमेनान्नेन दुष्टेन तदेवाविश्य कुर्व्वते ॥
विष्टभ्यन्तोऽलसकं च्यावयन्तो विसूचिकाम् ।
अधरोत्तरमार्गाभ्यां सहसैवाजितात्मनः ॥
विविधैर्वेदनोद्भेदैर्वाय्वादि भृशः कोपतः ।
सूचीभिरिव गात्राणि विध्यतीति विसूचिका ॥
तत्र शूलभ्रमानाहकम्पस्तम्भादयोऽनिलात् ।
पित्ताज्ज्वरातिसारान्तर्दाहतृट्प्रलयादयः ।
कफाच्छर्द्यङ्गगुरुतावाक्स्तम्भष्ठीवनादयः ॥
(वागभटस्य सूत्रस्थान ८मोऽध्यायः) ।

Hirsch says : "The oft-quoted passage from the Ayurveda of Suçruta, which is adduced as evidence of the occurrence of cholera in India in the remotest antiquity, and upon which, for example, Wise relies ('Commentary on the Hindu System of Medicine', Calcutta, 1845, p. 330) appears from the translation of Liétard (given by Scoutetten in 'Gaz. hebdom. de Méd.,' 1869, No. 29, p. 452) to furnish a picture of the disease that is, to say the least, an ambiguous one; and this objection is entirely apart from the doubt as to the very great age of the writing, at least in the form in which it now exists, and the reasonable suspicion that its author or editor had made use of Greek writings as a model." [1]

As regards the age of the writing and the indebtedness of the Hindus to the Greeks in medicine I refer the readers to my work, "The Surgical Instruments of the Hindus" where I have discussed the questions in detail. I will here simply try to prove the identity of the Visūcīkā and Cholera.

It will be seen that the cardinal symptoms of cholera or (*i*) cholera gravis, according to modern authorities correspond to the symptoms of Visūcīkā mentioned in Sanskrit works:

Cause: "Excess in eating, often of badly prepared or decomposing food, following periods of religious fasts, predispose the nation of India to Cholera." Stitt.	न तां परिमिताहारा लभन्ते विदितागमाः। मूढास्तामजितात्मानो लभन्तेऽशनलोलुपाः। (B)
Prodromal or premonitory diarrhœa.	अजीर्णं (S), विपाक (C).
First stage or the stage of evacuation:	विसूचिकामूर्ध्वाधश्च प्रवृत्ताः दोषां यथोक्तरूपां विद्यात्। (C).
Vomiting: first stomach contents, then rice-water.	वमथु (B), छर्दि (C).
Purging: profuse and frequent.	अतिसार (B).
Stool: fœcal first, then rice-water stool.	अतिमात्रप्रलीन मल (C).
Cramps and stabbing pain: especially of calf-muscles and those of feet; abdominal muscles less so.	सूचिभिरिव गात्राणि तुदन् (S); अङ्गमर्द (C); उद्वेष्टन; हस्तपादयोः (B); खल्ली (C); हस्तादौ शिरामोटनरूपा वेदना (S.D.); जङ्घादीनां मोटनं खिल्लधरा इति लोके (D).
Thirst: unquenchable.	मुखशोष (C); तृष्णा, पिपासा (B); तृष्णा (C).

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[1] Hirsch: Handbook of Geographical and Historical Pathology, New Sydenham Society's Edition, 1882, Vol. I, p. 432.

Prostration : sudden loss of strength, yawning.	जृम्भन (B, M) ; आलस्य (C).
Gastrodynia.	शूल (C).
Second stage : The stage of collapse : the algid stage.	तन्द्रा (C) ; संस्तम्भन (C).
Purging : frequent ; rice-water stool.	अतिसार (B,C).
Vomiting	वमथु (B).
Thirst : urgent	तृष्णा (B.C.)
Nausea	उत्क्लेश (C.D), उपस्थितं वमनमिव (B).
Cramps	खल्ली (C).
Failure of strength, complete lassitude.	विमुक्तसन्धि (B) ; प्रमीलक (S.D).
Animal heat : Superficial temperature reduced.	कम्प (B) ; शीतज्वर (C).
Rectal temp. elevated ; sense of heat. Hyperthermic type fatal.	अन्तर्दाह[1] (C).
Circulation :	दाह (M).
Heart	हृदयरुज (B).
Pulse : imperceptible	शिरासङ्कोचन (C).
Excretions :	
Urine : aneuria	मूत्राघात (B) ; आनाह (C).
Bile	
Voice : *Vox Cholerica* : husky, whispering.	वाक्स्तम्भ (V) ; वाक्सङ्ग (V).
Excessive restlessness then apathy.	ग्लानि (B). गात्रगौरव (C) ; अङ्गगुरुता (V).
Perspiration : profuse ; cold clammy skin.	घर्म्म, स्वेद ।

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[1] The symptom called "antardāha" अन्तर्दाह literally means *internal burning.* In this stage the general appearance of the patient is bluish and his respiration labored.

अन्तर्दाहः शैत्यं बहिश्च यस्य सततं महाश्वासः ।
अङ्गमिव दग्धकल्पं, सोऽन्तर्दाहार्दितः कथितः ॥

CSL

Countenance: peculiar expression; cadaveric appearance: cyanosed, drawn, pinched face.	श्यामवर्ण (B).
Eyes : sunk	अन्तप्रविष्ट चक्षु (B).
Complexion : blue	वैवर्ण्य (B).
Shrivelling of the skin of extremities : washer-women's hands.	
Doughiness of the skin of the abdomen :	कुक्षिरागश्चते (S) ; आध्मान (D).
Dulness of perception	अल्पसंज्ञ .
Common sensibility : dull	भ्रम (B, C) : मूर्च्छा (C).
Appetite : anorexia	अग्निवैषम्य (C) ; अरोचक (C).
Vision Hearing	impaired, विसंज्ञता (B).
Smell	
Taste	अरोचक (C)
Motion	आलस्य (C).
Integrity of consciousness :	
The Intellect : delusion.	विसंज्ञता (B) ; भ्रम (B, C) ; मत्तता, प्रलाप (C) ; प्रलय (V)
The Will	मद (C)
The Emotion	
Headache	शिर:शूल (B); शिररोग (S.D); शिरस: भेद: (S).
Sleeplessness	अनिद्रा (B).
The third sage or the stage of reaction :	
Cholera typhoid :	
Surface warmer.	
Pulse : distinct.	
Urine : secreted.	
Temperature : febrile.	ज्वर (C,V).
Typhoid stage :	

Death : Pneumonia. Enterites. Asthenia. Uræmic poisoning : Coma and convulsion.	मोह, तन्द्रा (C).
(*ii*) Cholera Sicca ...	Alasaka अलसक।
The patient dies of collapse without showing symptoms of vomiting or diarrhœa. "There is no, or very little, diarrhœa and vomiting, collapse sets in so rapidly that the pateint is quickly overpowered as by an overwhelming dose of some poison, and dies in a few hours without purging or any attempt at reaction. At the *post-mortem* examination, the rice-water material, so characteristic of cholera, though it may have not been voided during life, is found in abundance in the bowels.' Manson : Tropical Diseases, 1900-1, pp. 36-45.	Kāśyapa says[1] : "The ingested food is neither ejected by vomiting and purging, nor digested, but remains in the intestinal canal. Just as a man who does no work is called idle, so the ingested food remains idle, and hence the disease is called Alasaka (Alasa=idle)." Caraka says : "The poisonous undigested material, not being got rid of by vomiting and purging, suppresses the functions of the body which then resembles a stick. (It is called दण्डकालसक by V). In this stage the Alasaka is incurable. * * * As these symptoms resemble the symptoms of death caused by poisoning, the derangement is called *Āma-Viṣa* or the poison of indigestion."

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[1] नाधोयाति न चाप्यूर्ध्वमाहारो न च पच्यते ।
कोष्ठे स्थितोऽलसीभूतस्ततोऽलसकः स्मृतः ॥
Kāśyapa.

Dyspnœa	...	महाश्वासः । निरुद्धो मारुताश्चापि कुक्षावुपरिधावति (S).
Hiccough	...	हिक्का (S).
Belching	...	उद्गार (S).
Tympanites	...	आध्मान, विष्टम्भ (C).
Cries for pain	...	अत्यर्थ कूजति (S).
Retention of urine and fæces		वातवर्च्चोनिरोधः (S).

In Visūcikā (cholera gravis) and Alasaka (cholera sicca) the following symptoms are said to be of bad prognosis :

दन्त, ओष्ठ, नख श्यामवर्ण (B)	...	Blueness of teeth, lips and nails. Cyanosis.
अल्पसंज्ञ	...	Slightly conscious.
चक्षु अन्तप्रविष्ट अभ्यन्तरयातनेत्रः (M)	...	Eyes deeply sunk in the orbit.
वमि	...	Vomiting.
मोह	...	Loss of consciousness.
क्षामस्वर (B)	...	Weak voice.
विमुक्तसन्धि (B)	...	Looseness of joints.
स्तम्भ (S)	...	Cessation of stools entirely is a symptom of evil omen.

पीडितं मारुतेनान्नं श्लेष्मणा रुद्धमन्तरा ।
अलसं क्षोभितं दोषैः शल्यत्वेनेव संस्थितः ।
शूलादीन् कुरुते तीव्रास् छर्द्यतीसारवर्ज्जितान् ॥
कुक्षिरानह्यतेऽत्यर्थं प्रताम्यत्यर्थ कूजति ।
निरुद्धो मारुतश्चापि कुक्षावुपरिधावति ॥
वातवर्च्चोनिरोधश्च कुक्षौ यस्य भृशम्भवेत् ।
तस्यालसकमाचष्टे हिक्कोद्गारौ तु यस्य तु ॥

Suśruta Saṁhitā, VI. 56.

Caraka recommends common salt and hot water to excite vomiting in the treatment of cholera : तत्र साध्यमामं प्रदुष्टमलसीभूतमुल्लेखयेत्, पाययित्वा लवणमुष्णञ्च वारि ।

CSL

(*iii*) In the variety called विलम्बिका or दण्डालसका we find the following symptoms described :

दुष्टन्तु भुक्तं कफमारुताभ्यां प्रवर्त्तते नोर्द्धमधश्च यस्य ।
विलम्बिकां तां भृशदुश्चिकित्स्यामाचक्षते शास्त्रविदः पुराणाः ॥

Suśruta Saṁhitā, VI, 56.

भृशदुश्चिकित्स्याः—प्रत्याख्यायोपचरणीयं । इदमसाध्यञ्चेति जेज्जटः । (B)

"When the ingested food is neither ejected by vomiting nor by purging due to deranged Kapha and Vāyu, the disease is called Vilambikā by the anceint physicians learned in science. It is difficult to cure."

The Vilambikā and Alasaka, the two varieties of Visucikā of the Āyurveda show the same symptoms, *i.e.*, collapse without vomiting and purging, the only difference being that in Alasaka there is intense griping pain but in Vilambikā pain is absent.

The Sanskrit name for Asiatic cholera is *Visūcikā* which is drived from *sūcī* a needle or pin, implying that in cholera peculiarly painful sensation all through the body like the piercing pain caused by a needle or pin occurs.

सूचीभिरिव गात्राणि तुदन्सन्तिष्ठतेऽनिलः ।
यत्राजीर्णेन सा वैद्यैर्विसूचीति निगद्यते ॥

Thus we find that the disease described as Visūcikā in the Āyurveda produces all the symptoms of cholera, and there is scarcely any doubt that cholera was known to the Hindus in ancient times. In Sanskrit books diseases are not described in detail,—only the main symptoms are mentioned. Dalvanācārya writes : तदत्र विसूच्यादीनाम् प्राग्रूपं न भनितं तद्रूपाण्येव अव्यक्तानाम् न सम्भवन्ति अतः प्राग्रूपं नाभिहितं । (vi. 56).

The following abbreviations are used :

C=Caraka. S=Suśruta. B=Bhāva Miśra. S. D.=Śivadāsa. V=Vāgbhaṭa. M=Mādhava Kara. D=Dalvanācārya. C.D=Cakradatta.

(*iii*) *Small Pox and Vaccination.*—The ancient Greeks and Romans were unacquainted with small pox (Friend, Mead, Mason Good, Adams) although William (Inquiry into the Antiquity of Small Pox), Moore (History of the Small Pox), and Baron (Life of Jenner) have tried to prove the contrary. It is generally supposed that small pox was first described by Ahron in the "Pandects" in th fifth; by Procopius in his "De Bello Persico" in the sixth and more in detail by Rhazes in his treatise "De Varioliset Morbillis." in the tenth century A.D. Greenhill's translation of Rhazes's work forms one of the volumes of the Sydenham Society's publications. But the disease was well known to the Hindus and the Chinese about 1100 B.C. There is a Chinese treatise written long before Christ, entitled 'Teontahinfa' or 'Heart Words on the Smallpox'. Holwell, in his "Account of the Manner of Inoculating for the Small Pox in the East Indies," 1767, p. 8, refers to the traditions among the Brahmans concerning the prevalence of small pox in India and to the temple-worship of Śītalā, the goddess of small pox from very ancient times.

"According to Holwell, traditions have existed in the Brahmin caste from time immemorial concerning the prevalence of small-pox in India. There has existed in that country from the earliest times the temple worship of a deity whose protection and help were invoked on the epidemic outbreak of the disease. In the Atharva Veda a description of this temple service is contained, together with the prayers used by the Brahmins at the inoculation with small-pox, which has been practised there from the remotest antiquity."[1]

Dr. Chapman says that "at a very remote period, in Hindustan, a tribe of Brahmins, resorted to it as a religious

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[1] J. W. Moore: XXth Century Practice of Medicine, Vol. XIII, p. 390.

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ceremony. A small incision was made and cotton soaked in the virus applied to the wound. Offerings were devoted to the goddess of spots, to invoke her aid; this divinity having hinted at inoculation—the thought being much above the reach of human wisdom and foresight."

"The temple-worship is very widely spread in India; the goddess to whom it is offered, bears various names in various parts of the country, corresponding mostly as it seems to the character of the disease or to the mode of treatment. According to Moore ('Med. Times and Gazette,' 1869, Nov., p. 634) numerous temples of this kind are met with in Rajputana."[1]

There "the people firmly believe variola to be under the control of the goddess Matha, in whose honor temples abound throughout Marwar and fairs are even held at Joudpoor. Near the latter city is a space of ground filled with trees, called 'Kagli Ka Bagh' and containing the 'Setla Deir' (or smallpox-godess's shrine). In the month of March a *mela* is held here in honor of Matha, and thousands of women and children attend with offerings for the goddess. The declivities of most of the numerous conical hills present either a reddened stone or a temple devoted to Matha with most probably an attendant Brahmin priest. Nearly every village has its goddess of small-pox in the immediate locality, and a large piece of ground is esteemed as holy, and 'Matha Ka Than.'"[2]

Small-pox Inoculation in India.—"A paper was read in 1767 before the Royal College of Physicians in London by Mr. J. Z. Holwell, F.R.S.,

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[1] Hirsch's; Geographical and Historical Pathology (Syd. Soc. Ed.) Vol. I, p. 125.

[2] Sir W. J. Moore: Marwar the Land of Death.

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entitled 'An Account of the Manner of Inoculating for Small-pox in the East Indies.' This paper is extremely interesting, not only because it states the views of a physician on a practice which still prevails to some extent, though unlawfully, in India, but because the writer, as an early Governor of Bengal, was one of the founders of our great Empire in the East, and had during a residence of thirty years in the tropics actively practised his profession for eighteen of them.

"I will commence by giving a brief summary of the paper. Mr. Holwell observes that the 'the salutary method (of inoculation of small-pox) now so happily pursued in England (howsoever it has been seemingly blundered upon) has the sanction of the remotest antiquity. For five and sometimes six years together it passes in a manner unnoticed from the few that are attacked with it, for the complexion of it in these years is generally so benign as to cause very little alarm; and notwithstanding the multitudes that are every year inoculated with it in the usual season, it adds no malignity to the disease taken in the natural way, nor spreads the infection as commonly imagined in Europe. Every seventh year, with scarcely any exception, the Small-Pox rages epidemically in these provinces, during the months of March, April, and May; and sometimes until the annual returning rains, about the middle of June, put a stop to its fury. On these occasions the disease was of the most malignant confluent kind, from which few escaped that took the distemper in the natural way, and they commonly died on the first, second, or third day of the eruption, and the Europeans usually fled from the settlements before the return of the small-pox season. There was hardly ever an instance of a native of the island of St. Helena, man or woman, who if attacked when in Bengal with the disease in a natural way, escaped with life.' This he attributed to some fundamental error of their diet.

"There was reason to believe from the institution of offerings to the goddess of small-pox that the disease had existed from very remote times in India, and had, indeed, spread from it to the West. Inoculation was performed by Brahmans from Brindaban, Allahabad, Benares, etc., over the country. They arrived in Bengal early in February or March before the usual return of the disease. The people prepared the patients for the operation by a restricted diet, and the Brahmans would not operate unless this had been done. The inoculators passed from house to house and operated at the doors asking how many pocks the parents wished, and preferred to operate, for males between the wrist and the elbow, and for females between the elbow and the shoulder. Fifteen or sixteen minute scarifications were made with an iron or steel instrument, and a rag charged with variolous matter from inoculated pustules of the previous year was allowed to remain on for about six hours. The wound was also moistened with Ganges water and the part was, in the first place, dry-rubbed for about seven or eight minutes. All the time the goddess was being invoked. Cold water was poured over the patient up to the time the fever appeared, and again after the eruption came out until the scabs of the pustules dropped off ; and restricted diet was ordered for a month. The pustules were opened with a sharp-pointed thorn. The patient was exposed freely to the air outside the house, and the eruptic fever was generally so slight as not to need much restriction. The operation rarely failed, nor did any one often miscarry under it, and the number of pustules was rarely less than fifty or more than two hundred.

"Although very early prejudiced against the cool regimen and the free admission of air, Holwell soon came to the conclusion that any one who did not adopt that treatment would lose many patients. He suggests reasons for agreeing with the Brahmans that it was wise to disallow the use of milk during the progress of the affection and he then refers to their ideas as to the causation of the disease, which were as follows. The immediate cause of the small-pox was believed to exist in the mortal part of every human and animal form. In a footnote he states that at the time of the confluent small-pox epidemics turkeys and other poultry were carried off by the disease in great numbers, and even his own parrot was found on dissection to have as many pustules in his digestive tract as on his body. The mediate cause which stirred up the first and threw it into a state of fermentation was, it was considered, the presence of innumerable imperceptible animalcules floating in the atmosphere. These, they said, cause all epidemical diseases, and imprison most malignant spirits. These particles pass in and out of the respiratory tract without doing any harm, but cling to the food and especially to milk and the other articles which the Brahmans prohibit when the diet is restricted. Holwell himself saw no reason why such pestilent animalculæ, driven by certain winds, or generated on the spot by water and air in a state of stagnation and received into the body with food, should not be the cause of the spread of malignant epidemics at particular seasons, and that epidemical blights, which may be observed to go often hand in hand with epidemical diseases, may be due to similar causes. The friction and the dilution with water seemed to promote absorption and, as Ganges water was used, confidence was given to the patient and he was impressed with the solemnity and piety of the whole transaction.

"Holwell particularly testifies to the value of the affusion of cold water from a height up to the time of the

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appearance of the fever, and again when the eruption comes out, and further says he was an eye-witness of its power and utility when the pustules had sunk. He agrees with the Brahmans in attaching great importance to opening the pustules with a thorn, as this mitigates or prevents the second fever. The opening with a thorn has also the advantage of the orifice being so small that there is no admission of air into the part. In conclusion, in laying again great stress on the cool regimen and on the free admission of air he trusted they might be introduced into regular and universal practice."[1]

The Antiquity of Vaccination in India.[2]—"Under this heading a leading article appeared in the British Medical Journal of April 15th, in which reference was made to a claim advanced by Lord Ampthill on behalf of the Hindus of having practised vaccination many centuries before it was, to use his own word, 'rediscovered' by Edward Jenner. Lord Ampthill based this claim on a passage in an ancient Sanscrit work by Dhanwantari which he said had been discovered by Colonel King and brought to his notice by that distinguished officer two years before. The speech in which the passage occurred was made by Lord Ampthill on the occasion of the formal opening of the King Institute of Preventive Medicine at Guindy on March 11th, a report of which was published in the *Madras Weekly Mail* of March 16th.

"In commenting on that speech we ventured to hint that Lord Ampthill had somewhat misunderstood the information supplied to him, as the existence in Sanskrit

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[1] B. M. J., 1905., June 17, p. 1336.

[2] B. M. J., 1905, July 12, p. 136.

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works supposed to be ancient of passages in which vaccination was described had been known for something like a century. In proof of this statement we referred to Baron's *Life of Jenner* in which mention is made of passages purporting to be extracts from a medical work attributed to Dhanwantari which were published in the *Madras Courier* of January 12th, 1819. In these passages an account was given of the inoculation of matter from the cow as a protective against small-pox. It was added that Baron had made inquiries as to the genuineness of those passages of eminent Oriental scholars, who considered that there were good grounds for suspecting that they were interpolations made with the object of inducing the Hindu to submit to vaccination by making him believe that it was a traditional practice among his people. In reference to the article, the main points of which are here recapitulated, we have received the following letter, dated May 10th, from Lieutenant-Colonel W. G. King, I.M.S., C.I.E., Sanitary Commissioner for Madras :

'In your issue of the 15th April, you refer to the above subject, as discussed by His Excellency Lord Ampthill in his address at the opening of the King Institute, Madras. During his tenure of office he has, as is well known, taken every opportunity of encouraging the advance of preventive medicine, and has also exhibited interest in the historical bearing of the subject in this country, in connexion with ancient Hindu writings. In response to a query on the latter aspect two years back, I furnished him with the paper to which he referred. As Lord Ampthill's statements, in this particular, were made on the authority of this document, it rests solely with me to deal with the matter.

'The paper in question was published in the *Madras Mail* in 1899, in response to a request for information to me personally in its columns by the late Surgeon-General Sir Charles Gordon. It opened by referring to the oft-quoted passage from the *Madras Courier* of 1819, and stated distinctly that it had 'at intervals been circulated to the lay and medical press.' I then proceeded to say that for many years I had attempted, with the aid of Sanscrit scholars, verification of its origin from Dhanwantari, and, after alluding to the difficulty attending such researches, explained that 'the nearest approach' to settling the question was obtained when hunting for Sanscrit references for plague, by the quotation being found in a Sanscrit work entitled *Ayurveda Vijnana*. This is a modern compilation of extracts from various authors. As a fact, it was I who, though no Sanscrit scholar, was able to arrest attention to the passage whilst the book was being read aloud to me, as I had heard it so often quoted; and it was to this little incident Lord Ampthill had the kindness to allude. Since that period it has also been found for me in the *Sabdakalpadruma*, which is also a modern compilation, written by Rajah Sir Radakant Deb Bahadur. This author was held in the highest respect by the best Sanscrit scholars including Max Müller—a fact which should weigh in favour of the genuine character of the quotation. The work was completed, according to the author, in the thirtieth year of his age, or six years before the appearance of the *Courier* quotation. It is necessary to allude to these facts, as you have in your article erroneously assumed that I had made a claim to precedence in respect to the *Madras Courier* of 1819, in first drawing attention to the subject.

'Your main object is, however, to throw doubt upon the validity of the quotation. Unfortunately, I am not in a position to consult Baron's work, quoted as your authority; and I am placed in some difficulty by your not positively affirming that the false 'poem' actually contained the particular verse ascribed to Dhanwantari. I shall be very much surprised if this can really be done by you. But, even if this subject be treated in the general manner you have done, I think it reasonable to believe that Baron must have misunderstood Sir John Malcolm; he must have muddled the whole subject. Far from Ellis being the criminal, he was eminently an interpolation detective. In the fourteenth volume of the *Transactions of the Asiatic Society*, there will be found exposed by Ellis, in an essay that exhibited the depth of his learning as a Sanscrit scholar as well as his careful and impartial spirit, a gross fraud by Jesuits who had, for the purpose of advancing their religion, resorted to this means. The book which he thus criticized was entitled *L'Ezour Vedam*, and was published in Paris in 1778. If this date be taken into consideration, it is clear vaccination need not have been referred to, seeing that Jenner's scientific confirmation of empirically observed facts was not made till 1798, and vaccination was not introduced into Madras by Lord Clive (Earl Powis) until 1802. Failing, therefore, your being able to prove the quotation actually formed part of the poem you ascribe to Ellis, and you are able to state where the rest of the document is to be found, there is no reason to regard him as guilty of the grave charge made against him, or that we have adduced anything to disprove the ancient character of the quotation, rightly or wrongly attributed to Dhanwantari. I, of course, do not join issue with you as to your second instance of an interpolation, as this was not propounded by me.

'As the Vaccination Department of this Presidency is a branch of my office, I have every opportunity of consulting its records, and I may state that although it is evident many thousands of pamphlets encouraging vaccination

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were issued in former years, I can find no attempt to impress the people with the so-called 'poem' of Ellis and, in my opinion, such a base act would no more have secured official approval in India in the past than in the present; nor, in the Sanscrit libraries available in this Presidency, is there any trace of such a record.'

Later we received from Colonel King a further communication, dated May 25th, to the following effect:

'With reference to my letter to you dated May 10th, it is right that I should inform you that, after its despatch, I ascertained that I could not justly claim that Rajah Sir Radhakant Deb Bahadur personally admitted the disputed quotation into his *Sapthakalpadruma,* as the revised edition of this work in which it is to be found was published after his death, long subsequent to the first appearance in the *Madras Courier.* This in no way invalidates my other arguments or, indeed, greatly even in this particular, as the compilers of the revised edition are also recognized Sanscrit authorities.'

"If Colonel King will refer to our article of April 15th he will see that it was there expressly stated that we had had no opportunity of consulting his writings, and that what he calls our erroneous assumption that he had made a claim to precedence in respect to the *Madras Courier* of 1819 was founded solely on the statement attributed to Lord Ampthill that Colonel King had discovered the passage in question and had brought it to his notice. In regard to this we said that we could not help thinking that Lord Ampthill had misunderstood the information supplied to him. From Colonel King's letter it is clear that this is just what happened. On this point there is, therefore, nothing in dispute between us.

"On the general question of the interpolations our article was really in the nature of an inquiry addressed to

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the learned. We confessed our incompetence on questions of Sanscrit scholarship, and we gave Baron's statements for what they were worth in the hope of eliciting some authoritative utterance on a matter of considerable literary and historical interest. It is necessary to lay some stress on this, inasmuch as Colonel King seems determined to force us into a position of antagonism to him in regard to questions on which we have expressed no opinion, for the good and sufficient reason that we hold none. His quarrel is with Baron, and bearing in mind that

> 'Tis dangerous when the baser nature comes
> Betwixt the pass and fell incensed points
> Of mighty opposites ;

we decline to be drawn into the fray. That those of our readers as may be interested in the point at issue may have a full statement of the case before them, we give the whole passage as it stands in Baron's *Life of Edward Jenner* (London 1838, vol. i, p. 555, *et seq.*). After referring to a claim of priority in the discovery of vaccination made on behalf of a Frenchman by Husson in the *Dictionnaire des Sciences Médicales* (1821), Baron proceeds :

'The same work which sets forth the claims of M. Rabaut recounts likewise the pretensions of the Hindoos to the knowledge of vaccine inoculation. An ancient Sanscrit work has been appealed to as an authority on this subject.

The subject was mentioned many years ago in the *Bibliothèque Britannique*. It has more recently, been revived in the *Dictionnaire Médicale*, and in the *Madras Courier* of the 12th of January, 1819. The writer of the last-named article refers to *Sancteya Grantham*, a medical work attributed to Dhanwantari, which is said to be ' undoubtedly an ancient composition.'

From this work extracts are given. The first extract describes the method of performing the inoculation with fluid taken from a pock on the udder of a cow, or from the arm of a human subject, etc. The next more particularly describes the small-pox produced by the fluid from the udder of a cow, and appears, in short, to be an imperfect abstract of the opinions and descriptions of Dr. Jenner. It does not at all discriminate between the different sorts of pustules to which cows are liable; it is destitute of all the characters of fidelity and accuracy which give value to information of a scientific nature, and must, therefore, have been quite insufficient to have guided anyone in the management of the very practice it professes to teach. This practice, if it did exist at all in India, must have been extremely rare, but the description given of it is not like that which would occur to any inquirer who had himself investigated the very singular properties of cow-pox inoculation. On the contrary, it wears the appearance of a delineation which had been made, not from original observation, but from materials obviously acquired from other sources and put together with studied ambiguity, the writer having been more anxious to maintain the semblance of antiquity than to convey precise knowledge on the subject of vaccination, had it ever been obtained by the Brahmins, could have been overlooked, and allowed to remain in obscurity till it was called into notice by the industry of British residents in India. To no people on the earth was the secret of vaccine inoculation of greater moment than to the inhabitants of the East, and it exceeds all powers of belief to suppose that such a secret could have been possessed by the most respected caste, without being diffused universally, and the practice adopted with corresponding avidity. The suspicions excited by the internal evidence are not a little strengthened by some circumstances which I am about to mention. I made it my business to inquire from eminent oriental scholars whether such a Sanscrit work existed, and whether from their experience of the habits and customs of the Hindoos there was reason to believe that they possessed any knowledge of vaccine inoculation.

For valuable information on these points I have to express a deep feeling of gratitude and obligation to Sir John Malcolm, G.C.B., a gentleman not less distinguished by his genius and skill as a commander than by the wisdom, learning, energy, and benevolence evinced in all his civil relations. Through his kindness I am enabled to state the following facts:

On the introduction of vaccine inoculation into India it was found that the practice was much opposed by the natives. In order to overcome their prejudices the late Mr. Ellis, of Madras, who was well versed in Sanscrit literature, actually composed a short poem in that language on the subject of vaccination. This poem was inscribed on old paper, and said to have been found, that the impression of its antiquity might assist the effect intended to be produced on the minds of the Brahmins while tracing the preventive to their sacred cow.

The late Dr. Anderson, of Madras, adopted the very same expedient in order to deceive the Hindoos into a belief that vaccination was an ancient practice of their own. It is scarcely necessary to observe that had any authentic record of such a practice existed these gentlemen never would have resorted to such a contrivance to gain their object. It is further to be observed that smallpox inoculation was frequently practised by the Hindoos, but there is no proof whatever that they employed vaccination.

Shortly after the introduction of vaccination into Bengal, similar attempts were made to prove that the practice was previously known there also. As the account of this transaction is somewhat different from that which occurred at Madras, it is proper to mention it. A native physician of Bareilly put into the hands of Mr. Gillman, who was surgeon at that station, some leaves purporting to contain an extract of a Sanscrit work on medicine.

This work is said to be entitled *Sud'ha Sangreha*, written by a physician named Mahadeva, under the patronage of Raja Rajasin'ha. It contained a chapter on Masurica or chickenpocks.

Towards the close, the author appears to have introduced other topics; and immediately after directing leeches to be applied to relieve bad sores he proceeds thus: 'Taking the matter of pustules, which are naturally produced on the teats of cows, carefully preserve it, and before the breaking out of small-pox make with a fine instrument a small puncture (like that made by a gnat) in a child's limb, and introduce into the blood as much of that matter as is measured by a quarter of a ratti. Thus the wise physician renders the child secure from the eruption of the small-pox.'

This communication was shown to Mr. Colebrooke and Mr. Blaquiere, both eminent Sanscrit scholars, and they both suspected that it was an interpolation. The first-named gentleman further adds that the original work, from which the extract purports to have been taken, was not exhibited to anyone well versed in Sanscrit. I believe I may further add that Mr. Colebrooke made inquiries whilst in India, which fully satisfied him that no original work of the kind ever had existence. Sir John Malcolm has also been kind enough to ascertain that no such book is to be found in the library of the East Indian Company.

From these statements it must be apparent that the well-meant devices of those who attempted to propagate

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vaccination in India, have led to the belief that the practice was known to the Hindoos in earlier times.'

"From a letter which appears in the *Madras Mail* of May 30th we gather that since the date of his last letter to us Colonel King has had an opportunity of referring to Baron's book at first hand. He adheres to his opinion that Jenner's biographer made "a complete muddle of the information received by him from Malcolm." We must frankly say that, if he did, Colonel King does not seem to us to have cleared up the muddle. Here, as far as we are concerned, the matter must rest."

We have furnished the readers with these long quotations in the hope that they may be interested in the important question as regards the origin of vaccination. There could not be any doubt as to the practice of inoculation by the Brahmans long before the advent of the English in India, Holwell's testimony supports it. But whether vaccination was ever practised in India before the discovery of Jenner was a question which could not be answered offhand. The only proof extant was the couplets in Sanskrit quoted in the Madras Courier in 1819, and subsequently in the Savdakalpadruma. The couplets are said to have been quoted from Śākteya Grantha of Dhanvantari. I could not trace any such work in the libraries of India, nor has the work been found in the library of the East Indian Company. No reference to it was found in the Sanskrit literature. Below I quote these couplets with translations.

It seems strange that no reference as to the practice of vaccination in India can be traced in the works of Caraka, Suśruta, Vāgbhaṭa, Mādhava, Vṛnda Mādhava, Cakradatta, Bhāva Miśra and others. But no conclusion can be drawn from this negative evidence. Neither do we find any reference to the practice of inoculation in

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the works of the authors cited above. In Av., V. 22, we find a reference to the eruptive fevers: fever with spots on the surface of the body. The spotted or speckled fever—" covered with spots, like reddish sediments" undoubtedly refers to some eruptive fever, as the fever accompanying measles or small-pox. But I have not been able to trace any reference to the temple worship of the goddess of Small-Pox, " with the prayers used by the Brāhmins at the inoculation with Small-Pox," as described by Holwell. But there is no doubt that inoculation was frequently practised in India.

In the hymns to the goddess Śītalā which I have quoted below from the Kāśikhaṇda of the Skanda Purāṇa, it is distinctly stated that there is no medicine for this dire disease except prayers to this goddess. She is represented as having four hands, holding a broom-stick in one hand, a water-pitcher in another, a lotus in the third and the fourth hand is shown in the attitude of Abhayā mūdrā, —the sign of fearlessness and hope. She rides on an ass, and has a winnowing fan as her head-dress. She is represented as naked. She resides in water. Śītalā really means goddess of coldness or water. Her attributes refer to the hygienic measures to be adopted when Small-Pox rages in an epidemic form. Though described as a goddess whose idol is worshipped by the mass, the patient is advised to contemplate her as thin like one of the fibres of petiole of lily, situated between his heart and navel.

The broom, fan and the water-pitcher are the appliances necessary to keep the room in which the patient is isolated, clean and free from flies. Her nakedness is meant to represent the fact that the disease is often carried to healthy individuals through the clothes of nurses, who should be as scantily dressed as possible.

The Śītalā is the Pauranic adaptation of the Vedic Āpo Devī who is also described as the mother. The

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word Ap in Sanskrit is used in feminine gender, hence both Āpo Devi and Śītalā Devi are described as female deities. The Brahmans still recite in their daily-prayers the beneficial qualities of water, invoked as mother by the Sindhudvīpa Ṛṣi in the Gāyatrī metre:

> "आपोहिष्ठा मयोभुव स्तानऊर्ज्जेंदधातनः महेरणाय चक्षसे ।
> योवः शिवतमोरसः तस्यभाजयते हनः । उशतीरिव मातरः ।
> तस्माअरं गमाम वो यस्य क्षयाय जिन्वथ आपोजनयथाचुनः ॥"

Water was regarded by the Vedic Indians as the source of medicine, and was used by them as a therapeutic agent of great value. It was also a means of purification.

"Water is the elixir of immortality (S.P. Br., 4, 3, 15); water being a means of soothing—they soothe by means of soothing water (*ibid*, 13). "Water is a means of purification, hence he purifies himself with water" (S.P. Br., I. 7, 4, 17). "Within the waters is ambrosia, in the waters is medicine" (S.P. Br., 1, 4, 6; Vāj. Saṁ., ix, 6).

In Rv. (x, 9, 5, 6 and 7; 137, 6) the water is described as the source of medicine; and in Av., II, 3, there is a charm against excessive discharges from the body, undertaken with spring water (see author's work "Medicine in the Atharva Veda"). In Yv. (Vāj. Saṁ., ix, 6, 1) water is also described as the source of medicine, and in xi, 38, water-goddesses are prayed for a cure. In Rv., x, 9, 1, disinfecting properties are attributed to water.

Water as a medicine is mentioned in Rv. (i, 23, 19, 20; 34, 6), Tai. Saṁ. (vi. 4, 9, 2) and Kauśitakī Br., (xvi, 7).

The application of cold water in hyperæmia was well known. The spring water which runs down upon the mountain was used as a healing remedy; it was recommended as useful in checking discharges and removing pain. It is also styled as the great healer of wounds. The water is said to contain a hundred remedies. Flowing water is prayed to grant a cure for heart-ache, ocular pain, and pain in the feet. The waters are called the most skilled of physicians (Av., vi, 24). "Waters are verily healers, the waters are scatterers of disease, and the waters cure all diseases" (Av., iii, 7).

But there is neither any mention of the practice of inoculation nor of vaccination in the hymn to Śītalā. So it is difficult to decide whether inoculation, not to speak of vaccination, was practised in the Vedic or Pouranic ages.

शीतलाष्टक-स्तोत्रम् ।

अस्य श्रीशीतलास्तोत्रस्य महादेव ऋषिः अनुष्टुप् छन्दः, श्रीशीतला देवता लक्ष्मीबीजं, भवानी शक्तिः, सर्व्वविस्फोटकनिवृत्तये जपे विनियोगः ॥

ईश्वर उवाच ।

नमामि शीतलां देवीं रासभस्थां दिगम्बरीम् ।
मार्ज्जनीकलसोपेतां सूर्पालङ्कृतमस्तकाम् ॥ १
वन्देऽहं शीतलां देवीं सर्व्वरोगभयापहाम् ।
यामासाद्य निवर्त्तते विस्फोटकभयं महत् ॥ २
शीतले शीतले चेति यो ब्रूयाद्दाहपीड़ितः ।
विस्फोटकभयं घोरं क्षिप्रं तस्य प्रणश्यति ॥ ३
यस्त्वामुदकमध्ये तु धृत्वा सम्पूजयेन्नरः ।
विस्फोटकभयं घोरं गृहे तस्य न जायते ॥ ४
शीतले ज्वरदग्धस्य पूतिगन्धयुतस्य च ।
प्रनष्टचक्षुषः पुंसस्त्वामाहुर्जीवनौषधम् ॥ ५
शीतले तनुजान् रोगान् नृणां हरसि दुस्तरान् ।
विस्फोटकविशीर्णानां त्वमेकामृतवर्षिणी ॥ ६
गलगण्डग्रहा रोगा ये चान्ये दारुणा नृणाम् ।
त्वदनुध्यानमात्रेण शीतले यान्ति ते क्षयम् ॥ ७

न मन्त्रो नौषधं तस्य पापरोगस्य विद्यते ।
त्वामेका शीतले धात्री नान्यां पश्यामि देवताम् ॥ ८
मृणालतन्तुसदृशीं नाभिहृन्मध्यसंस्थिताम् ।
यस्त्वां विचिन्तयेद्देवि तस्य मृत्युर्न जायते ॥ ९
अष्टकं शीतलादेव्या यो नरः प्रपठेत् सदा ।
विस्फोटकभयं घोरं गृहे तस्य न जायते ॥ १०
श्रोतव्यं पठितव्यञ्च श्रद्धाभक्तिसमन्वितैः ।
उपसर्गविनाशाय परं स्वस्त्ययनं महत् ॥ ११
शीतले त्वं जगन्माता शीतले त्वं जगत्पिता ।
शीतले त्वं जगद्धात्री शीतलायै नमो नमः ॥ १२
रासभो गर्दभश्चैव खरो वैशाखनन्दनः ।
शीतलावाहनश्चैव दूर्व्वाकन्दनिकृन्तनः ॥ १३
एतानि खरनामानि शीतलाग्रे तु यः पठेत् ।
तस्य गेहे शिशूनाञ्च शीतलारुङ् न जायते ॥ १४

Kāsīkhaṇḍa,

The following descriptions in Sanskrit refer to the practice of inoculation and vaccination:

"धेनुस्तन्य मसूरी वा नराणाञ्च मसूरिका ।
शस्त्रेणोत्क्रत्य तत्पूयं वाहुमूले विचारयेत् ।
तत्पूयं रक्तमिलितं स्फोटज्वरकरं भवेत् ॥"
(धन्वन्तरीकृत शाक्तेय ग्रन्थः ।)

"The matter of the pustules on the teats of cows or on (arms of) men should be taken by means of a knife and introduced into the arms (of child); the pus as it mixes with the blood causes the fever of small-pox."

"देनुस्तन्य मसूरी वा नराणाञ्चमसूरिका ।
तज्जलं वाहुमूलाच्च शस्त्रान्तेन गृहीतवान् ॥
वाहुमूले च शस्त्रेण रक्तोत्पत्तिकरेण च ।
तज्जलं रक्तमिलितं स्फोटकज्वरसम्भवम् ॥"

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"Take the serum from the pustules on the teats of cows or from the arms of men at the end of a knife and introduce into the blood on the arm (of the child) caused by scarification with a knife. The serum when mixed with blood (of the child) causes fever of small-pox."—Dhanvantari's Śākteyagrantha, quoted in Savda Kalpadruma, Vol. V, p. 3311. Binodelal Sen's Āyurveda Vigñāna, Vol. IV, p. 178.

(*iv*) *Syphilis.*—Was syphilis known to the Vedic Hindus? It is very difficult to solve this question with certainty. Nowhere do we find any description of its symptoms; and we find no distinct mention of the disease. Bloomfield, however, thinks the disease Jāyenya to be syphilis. (Am. J. Ph., 11, 320; Hymns of Av., vii, 76, 559-561). Keśava and Sāyaṇa identify the disease as rājayakṣmā, *i.e.*, the same as Jāyenya in the story told at Tait. Saṁ., II, 3, 5, 1-3. (याज जायाभ्योऽविन्दत् । स च जायासम्बन्धेन प्राप्नोति । निरन्तर जायासम्भोगेन जायमानम ।) From the remedial agents used in the Kauśika practice, *viz.*, the string of a lute and the vivina plant (*andropogon muricatus*)—Bloomfield says, "I am tempted to regard the gayana as syphilis, etymologically either congenital disease (root *gan*), or venereal disease (*gāyā* 'woman'); in that case the musical instruments may refer to the nautch girls, and the disease is cured homœopathically and symbolically by the realisation of their presence, by means of the amulets." But the interpretation is far-fetched. Syphilis was unknown to Caraka and Suś. their works were composed towards the end of the Vedic age. For the first time the disease is described in the Bhāva Prakāśa, which was composed about three hundred and fifty years ago. The antiquity of syphilis is a question in which authorities differ. Hirsch says: "In the Ayur-Veda of Sûsruta there are several statements which make it at least very probable that venereal disease had occurred in India from the very earliest times." "Friedberg gives the passage, taking them from Hessler's translation as revised by the well-known Sanskrit scholar Professor Weber. Wise's handling of the history of syphilis in India (in his "Hindu System of Medicine," p. 375) is quite untrustworthy, as Friedberg justly pronounces it to be." Haeser also supported that syphilis had existed in antiquity. There are, no doubt, undoubted references in the earlier Sanskrit works to diseases of the genitals due to lewd or impure sexual connections:

तत्रातिमैथुनादतिब्रह्मचर्य्याद्वा तथा ब्रह्मचारिणीं चिरोत्सृष्टां रजस्वलां दीर्घरोमां कर्कशरोमां सङ्कीर्णरोमां निगूढरोमामल्पद्वारां महाद्वारामप्रियामकामामचौक्ष्यसलिलप्रक्षालितयोनिमप्रक्षालितयोनिं योनिरोगोपसृष्टां स्वभावतो वा दुष्टयोनिं वियोनिं वा नारीमत्यर्थमुपसेवमानस्य तथा करजदशनविषशूकनिपातनादर्द्दनाद्धस्ताभिघाताच्चतुष्पदीगमनादचौक्ष्यसलिलप्रक्षालनादवपीड़नाच्छुक्रमूत्रवेगविधारणान्मैथुनान्ते वाऽप्रक्षालनादिभिर्मेढ्रभागस्य प्रकुपिता दोषाः क्षतेऽक्षते वा श्वयथुमुपजनयन्ति तमुपदंश मित्याचक्षते ।

स पञ्चविधस्त्रिभिर्द्दोषैः पृथक्समस्तैरसृजा चैकः ।

तत्र वातिके पारुष्यं त्वक्परिपुटनं स्तब्धमेढ्रता परुषशोफताविविधाश्च वातवेदनाः ।

पैत्तिके ज्वरः श्वयथुः पक्वोडुम्बरसङ्काशस्तीव्रदाहः क्षिप्रपाक पित्तवेदनाश्च ।

श्लैष्मिके श्वयथुः कण्डुमान् कठिनः स्निग्धः श्लेष्मवेदनश्च ।

रक्तजे कृष्णस्फोटप्रादुर्भावोऽत्यर्थमसृक्प्रवृत्तिः पित्तलिङ्गान्यत्यर्थं ज्वरदाहौ शोषश्च याप्यश्चैव कदाचित् ।

सर्व्वजे सर्व्वलिङ्गदर्शनमवदरणं शेफसः क्रिमिप्रादुर्भावो मरणं चेति ।

Suśruta Saṁhitā, II, xii.

But it is known to every surgeon that there are many venereal sores which are not really syphilitic. It is only in the latter part of the nineteenth century that accurate knowledge of the different forms of venereal disease was made possible by advances in the science of pathology. And by modern historical methods, the long-discredited view that syphilis in the Old World was a disease of recent origin which could be traced to America has been revived.

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In his great work on the venereal diseases, Astruc traces the introduction of the disease into Europe from the date of the first voyage of Columbus in 1494. The disease is said to be endemic in Hispaniola and on parts of the American continent. The native women communicated the disease to the men who attended Columbus; it was then propagated to the Neapolitans, thence to the French, and gradually to other European nations. The source of this information is the work of the historian Gonsalvo Ferdinand ab Oviedo, "Summary of the Natural and General History of the West Indies" (1525). Hunter in his classical work on venereal diseases in 1775 supported the idea that the venereal disease had existed in Europe before Columbus sailed from Palos: his authority being the author of "Discovery of America"—Peter Martyr, a friend of Columbus. Prescott in his "History of the Reign of Ferdinand and Isabella (Vol. iii, p. 50, Lond., 1838) supposes that this loathsome disease was not brought from America. Bodman reproduced a passage from the chapter records of St. Victor, 1472, in which "Mala Franzos" is referred to. But Block and Hegel have found out the date 1472 to be a forgery.

The origin of syphilis, as of leprosy, is lost in the night of time. There are special difficulties in the identification of diseases mentioned in ancient writings. The ancient medical authors did not write the descriptions of a disease according to modern pathology, but availed themselves of the knowledge prevalent at the time, and we find their descriptions defective. They were also not able to distinguish, as in the case of syphilis, the morbid phenomena peculiar to the different stages of the disease. The early Sanskrit authors described many local affections of the genitals, caused by immoral intercourse. One of these morbid conditions was called Upadaṁśa. It was a purely local disease, and it is difficult to find any reference to affections of internal organs during the course of the disease. They did not comprehend the secondary and the tertiary stages of the malady. But we must not be surprised at this. The state of medical science was in an undeveloped stage and we should not expect in their descriptions the accuracy and minuteness of detail which characterise the descriptions of diseases of the present day. The justly celebrated Hunter, who has enriched the science of medicine with great discoveries, taught that he never observed syphilitic affections of the internal organs nor of the brain, inspite of the teachings of Fallopius and Botal to the contrary. Up to the time of Ricord, the three venereal affections, syphilis, soft chancre and gonorrhœa were not clearly differentiated. There was no doubt that venereal ulcer and gonorrhœa had always been in existence. It is creditable to the ancient Indian physicians that they differentiated the local venereal ulcer (Upadaṁśa) from urethral discharges (Meha). Certain descriptions of and references to diseases of the sexual organs in ancient and mediæval Sanskrit books could easily be taken as indicating syphilis at the time when the authors of those books lived. But on closer examination it would be recognised that the deceptive similarity between the local conditions of the ulcers did not develop symptoms which could be referred to syphilis. There is no evidence forthcoming that any causal connexion was discovered between the local ulcer and a skin eruption of the rest of the body until Bhāva Miśra wrote in the sixteenth century. There is no description of the syphilitic syndrome in any Sanskrit work before Bhāva Prakāśa was composed and in which for the first time we find a description of the disease called Ferañga Roga or the Portuguese disease. Similar names, French Pocks by the English, Polish disease by the

Russians, Frank disease by the Turks, French disease by the Italians point to its recent introduction.

Dr. Montejo Y Robleds, a Spanish army surgeon, investigated the origin of syphilis from Spanish sources and communicated his results to the International American Congress held at Madrid in 1882: he recognised that the recent introduction of the disease was connected with America. Professor Seler in 1895 supported his conclusions; and Professor Binz arrived independently to the same view—the American origin of syphilis.

Astruc, Girtanner and Hensler in the eighteenth century endeavoured to prove the origin of syphilis in America.

Similarly the celebrated letter of Petrus Martyr in which mention is made of "Morbus Gallicus," dated 1489, has been shown by the recent critical investigators to be fictitious and could not have been written before 1508. Hunter's conclusions based on experiments wrongly interpreted, were founded on his notion that gonorrhœa and soft chancre were syphilitic in origin. This idea prevailed up to the time of Ricord who first clearly differentiated them. The clinical physicians in the early post-columbian period confounded the pseudo-venereal and pseudo-syphilitic diseases which resemble the syphilitic syndrome. The literature of the Old World contain no unmistakable description of syphilis prior to 1495. The results of the disinterment of bones do not furnish any proof of the existence of syphilis in the Old World in historic and prehistoric times before the same date. Not a single bone has as yet been discovered which shows undoubted signs of syphilitic degenerations, in the barrows, lake dwellings, cave dwellings, cairns and even in the burial-places of the Mediæval times.

The sudden outbreak of the disease among the soldiers of Charles VIII of France in Italy in 1494-5 attracted the attention of physicians to this loathsome disease. The

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disease was unknown in Italy, and the disease in an epidemic form manifested its worst symptoms just as it does when introduced in a virgin soil. Both the Spanish authors mentioned before and the Italian chroniclers corroborate and supplement one another. The authentic reports of the contemporary Spanish authors—Diaz de Isla, Oviedo, Las Casas, Roman Pane, Hernandez and Sahagun—are in favour of the recent origin of syphilis. Columbus arrived in Barcelona in the year 1493 and syphilis spread there amongst the inhabitants. Thence it spread by the campaign of Charles VIII of France, in whose army many Spaniards served. “Syphilis had been known in Española from time immemorial, where it was called Nannavatly and the Indian method of cure by means of guaiacum and other vegetable beverages, in conjunction with hydrotherapeutic, dietetic, and climatic methods of treatment” bespeak highly for their rational method of combating the disease. Dr. Bloch's conclusion—“All available statements and facts point to the last decade of the fifteenth century—particularly the years 1493-1500—as the time when syphilis first appeared in the Old World. There is not a particle of evidence to show that the disease existed in Europe before that time”—may be accepted as the last word on the controversies regarding the origin of syphilis.

The osteological discoveries of the New World which are said to prove the existence of Pre-Columbian syphilis in the bones of the American Indians are no doubt remarkable. But the pre-Columbian age of the graves has not been definitely settled and the syphilitic nature of the changes in the bone is still uncertain.

Similarly other examples may be multiplied which may prove interesting as contributions towards our knowledge of the history and treatment of diseases. But we must not dilate any further.

Now let us consider the various ways of making the study of history of medicine popular among the medical practitioners in India :

1. *Museums.*—The establishment of museums containing relics of medical science in bygone ages is one of the great and most efficacious means for promoting the study of history of medicine. Museums containing objects of historical interests are of the utmost advantage both for education of students and the advancement of science. The specimens speak for themselves and they may be inspected with ease and rapidity. People like this objective instruction which is retained with pleasure in their memories. Such a collection of historical objects in a locality can be easily appreciated by the members of the medical profession who are ignorant of the language of the country. The museums of Aldrovandus, Hunter and Parkes proved to be of inestimable value to the advancement of knowledge. The museums generally contain some objects of exceptional medical interest.

James H. Aveling[1] remarks : " Historically, a museum of instruments is most desirable. For want of a home, many of the interesting mechanical contrivances used by early surgeons are lost or destroyed. If they could be collected and preserved, we should have the means of observing the progress of surgery as exemplified by the development of the instruments employed in various operations. There seems to be little reverence for, or appreciation of, the inventive genius and mechanical triumphs of our surgical forefathers. Who would not like to see the *armamentarium* of Harvey which he left to the College of Physicians, and which was unfortunately destroyed by fire ? Who can gaze with indifference on the obstetrical instruments of the Chamberlens, now happily in possession of, and carefully preserved by, the Royal Medical and Chirurgical Society ?

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[1] B. M. J. Dec. 22, 1888, p. 1416.

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But, apart from sentiment, a collection of old instruments, as far as possible bearing the names of their inventors and the dates of their invention, would settle many disputes as to priority of invention, and prevent many surgeons claiming as their own contrivances which had been invented long ago.

"There are, however, other cogent practical reasons for establishing a museum of instruments besides those of historical and objective instruction. It is necessary for the purpose of protecting the reputations of surgeons and the lives of patients; public safety demands its existence. My experience enables me to support this statement. I have invented several instruments, and in the shops of instrument makers and at exhibitions I have often seen these instruments so altered as not only to be useless, but dangerous. The changes are usually made by manufacturers who, not knowing the method of using the instruments, make alterations which they suppose to be improvements. Now the result of selling an imperfect or dangerous instrument, informing the buyer that it is the invention of a special surgeon, is to seriously damage the reputation of that surgeon, for he who bought it must, if he detect its worthlessness, think badly of the person who has the credit of having invented it; and if the discovery of its faulty construction be not made, the patient may receive great injury. At present there is no remedy for this dangerous practice of altering instruments. By patenting perhaps some check might be effected, but this plan is not likely to be adopted by the members of a liberal profession. A question, however, might arise whether it could not be proved to be penal to alter the construction of an instrument in such a way as to injure the reputation of its inventor, and render its use dangerous to the patient for whose relief it might be employed.

"An authoritative collection of instruments and appliances is the only remedy for the evils here pointed out. To this surgeons and instrument-makers might refer, and any doubt as to the proper form of an instrument might at once be satisfied. To this museum every new instrument should be sent, as every new book finds its way to the British Museum. Properly classified, the object sought might easily be found ; and if a surgeon failed to send a specimen of his invention, he would have no just cause of complaint, should he meet with variations of it he does not approve.

"Every one must be pleased that Mr. Hutchinson has so ably brought this subject to the front at the College of Surgeons, and all will, I believe, re-echo his concluding words : 'I cannot admit that the institution in which we are now assembled will have done all that it can for the perfecting of the art of surgery, until it has within its walls a collection, easily arranged for inspection and comparison, well labelled and catalogued, of all instruments and appliances, concerning the merits of which the practitioner may desire information."

A museum is a source of much instruction and information. The museums for pathological and materia medica specimens, both pharmacopœial and indigenous, can easily be started by the energetic action of our friends : specimens of drugs of all kinds with brief descriptions, pathological and microscopic specimens with short explanatory notes may be sent by the profession. These will be arranged and entered in a descriptive catalogue. Every facility should be given to students in their researches, as they may require to examine any specimen in the collections with more care and attention than can be done in the ordinary way of viewing the Museum. In the Medical College, Calcutta, we find that the subject of materia medica is sadly neglected. "The result is evident in every day practice.

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One hardly ever meets a junior practitioner who can write a prescription free from errors. Prescription-writing is fast becoming a lost art, and is in danger of atrophy from disuse. Newfangled remedies of unknown and questionable value are being freely used by the practitioners, only because they have not that training to write prescriptions themselves. It is therefore very important to realise the cause of this in our profession. Of all the subjects Materia Medica forms the armamentarium of the physicians, but unfortunately the most neglected of all the subjects. There is no proper museum where the students can examine specimens. There is not a single demonstrator to coach the students in the subjects. Students can hardly be expected to master the subject from lectures alone, and the result is practitioners become means of advertising medium for patent and proprietary medicines. The remedy therefore is to have one or more demonstrators on Materia Medica whose duty will be to take the students by batches, familiarise them with the different specimens, teach them the art of prescription writing and above all, the most important question of incompatibility. These demonstrators can have a revision class before the examination and give the students a 'grind.' At present practical pharmacy is done by the students under the apothecary of the hospital, who has enough work of his own as an apothecary to devote much time and attention for the training of the students." [1]

In the collection of economic products as displayed in the galleries of the Indian Museum, there are specimens of medicinal products, indigenous drugs, narcotics (opium, Indian hemp and tobacco) and the food substances (sugar, starch and cereals). In 1895, the Indian Indigenous Drugs

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[1] I. M. R. Jan., 1922, p. 16.

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Committee was founded, and the "Reporter on Economic product was appointed its Secretary. The drugs for experiment were distributed by the Medical Store Department and all the results of the clinical investigations were received in the office of the Reporter, where the meetings of the committee were held."[1] In the chemical laboratory for testing economic products in the Museum, "food products received attention, and analyses were made of numerous cereal grains, famine foods and pot herbs. Indigenous drugs were tested for their active principles and several were chemically examined for the first time. The following deserve mention: *Adhatoda Vasica*, Indian podophyllum, *kino*, *kamala*, *Waras*, Indian hemp, cinchona, Burmese storax, cutch, ipecacuanha and jalap."[2]

In England, John Tradescant and his son founded at Lambeth, in 1656, a general museum in which they collected all herbs in relation to medicine. Afterwards it became the basis of the Ashmolean Museum at Oxford. Soon after their time James Petiver, an apothecary to the Charterhouse, founded an important museum in London and made an extensive collection of entomological and botanical specimens. He died in 1718. All these early museums were associated with libraries. Charlton founded another museum in the Temple. Sir Hans Sloane bought the collections of Petiver and Charlton, added many more specimens and books and presented the museum to the nation, and thus formed the celebrated British Museum—a great library surrounded by illustrative collections. Fothergill was a collector of rarities and established a museum of great value. He bequeathed it to W. Hunter on the condition that he will have the offer of purchase at £5,000 below the real estimate.. Hunter paid £1,200 for this museum. He enlarged this musuem enormously by the addition of pathological, anatomical and natural history specimens, manuscripts, books, pictures and coins : the estimated expense amounted to £20,000. This valuable museum he made a gift to the University of Glasgow.

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[1] Indian Museum, 1814-1914, p. 66.

[2] *Ibid*, p. 67.

Of special museums—that is, collections relating to one subject only—I may mention the collection of John Dee, of mathematical and astronomical instruments and other curiosities in the reign of Queen Elizabeth ; the interesting collection of Edmund King, Surgeon to St. Bartholomew's, consisting of anatomical preparations as seen by Dr. Browne, the son of the celebrated Sir Thomas Browne, in 1664 ; the collection of fossils in small cabinets by the geologist Woodword, the founder of the Professorship of Geology at Cambridge ; the justly celebrated collection of a vast series of specimens in relation to comparative anatomy, pathology and normal anatomy, by John Hunter at the Royal College of Surgeons ; and lastly, the unique museum illustrating the history of medicine—the Wellcome Museum—which will be of great help to the means of studying the history of medicine.

"The Wellcome Historical Medical Museum, founded in London by Mr. Henry S. Wellcome in 1913, is now well known to those interested in the history of medicine throughout the world.

"International in character, the collection, which is being constantly augmented, covers a wide field embracing Medicine, Surgery, Pharmacy, Chemistry and the Allied Sciences.

"The Museum is designed to represent the history from the earliest times of these branches of the Healing Art throughout the world, and their practice is illustrated by objects, instruments and appliances of historical interest and by plastic and pictorial art.

"Medical practitioners in our Colonies and distant lands beyond the seas, especially those dwelling among primitive races, can render valuable help to the study of the history of medicine by sending native instruments or appliances used for surgical or medical purposes, or figures of deities associated with healing. Any objects of an unusual or curious nature, used in or connected with the practice of medicine, such as amulets, charms or talismans, with descriptions of their use, would be much appreciated, either as gifts or loans to the Museum." [1]

"The great interest aroused by the Historical Medical Museum during the recent meeting of the International Congress of Medicine has not abated, and we learn that the daily attendance at the Museum is still large. We recommend all doctors interested in the evolution of their art to visit it before September 30th, when it will be closed, to reopen, we believe, in the spring. Short accounts of the Museum appeared in the Journal of May 10th, p. 1035, and June 28th, p. 1379. Since then considerable additions have been made to the collection; but it is Mr. Wellcome's wish to make it as complete as possible. Many families have relics such as MSS., early printed books, diplomas, prescription books, autograph letters and other documents and objects associated with, or collected by, their ancestors who were engaged in medicine, surgery, pharmacy and the allied sciences. Often, on the death of those who cherish such relics, the things are relegated to the garrets, or sent to auction rooms where they are scattered amongst strangers who buy them for a trifle as curios, and so the history and record of associations with the original inventor

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[1] "The Wellcome Historical Medical Museum"—Preface.

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or user are lost for ever. We venture to suggest that it would be well if these things could be sent to take their place in the Historical Medical Museum, which has now been established in London on a permanent basis by Mr. Wellcome, where they would be preserved, and at the same time form a permanent tribute to the work and memory of those from whom they have been handed down. Many things which are insignificant and of little historical value in themselves if isolated in small private collections become important when brought into association with a series of others arranged chronologically; they often supply the missing links in the chain showing the evolution of such objects. An isolated historical object may be aptly compared to a single mosaic tessera which in itself alone signifies nothing, but when put in its place with others becomes part of a picture, and thus may help to complete a lasting record of a famous deed or a great event."[1]

A museum of the type described above is unknown to Indian physicians. It is undoubtedly true that in the Resolution of the Asiatic Society of Bengal in 1814, we find: "Resolved accordingly that the Asiatic Society determine upon forming a Museum for the reception of all articles that may tend to illustrate oriental manners and history, or to elucidate the peculiarities of art and nature in the East;" and that contributions were solicited from the public, relating to various objects among which occur "mineral and vegetable preparations peculiar to Eastern Pharmacy." It is also true that the collection of rarities by the Asiatic Society of Bengal on the plan of a great library surrounded by illustrative collections shows the zeal and earnestness of the collectors, but this collection which is the basis of the Indian Museum contains nothing of

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[1] British Medical Journal, September 13, 1913.

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interest in relation to medicine. It is like the collection of Francis Calceolari in Verona in 1422 : "Whatever the earth possesses, whatever has been hidden in the depths of the sea, the taste and skill of Calceolari has collected." The Medical College collection of pathological specimens is a good one but it is mainly intended for the use of students. But there is no museum, the object of which is to stimulate the study of the great past in connection with the history of medicine, chemistry, pharmacy, and the allied sciences by a collection of historical objects illustrating the development of the art and science of healing throughout the ages. Such a collection will elucidate many controversial points in relation to the origin and use of remedial agents, in respect of the history of diseases, and in connection with the early methods employed by medicine men in different parts of the world. It is highly desirable that we should form a body to collect informations "in regard to medical lore, early traditions or references to ancient medical treatment in manuscripts, printed works, etc." Such a museum will contain exhibits which may be classified according to the methods adopted by Mr. Wellcome in his Historical Exhibition.

2. *Exhibitions.*—The exhibitions, on a small scale, had been held in Calcutta, Madras and Bombay, in connection with Medical Congress and Āyurvedic Conference. But these were of a local character though they included specimens from manufactures other than Indian. An exhibition, international in character, is highly useful for the improvement of medical arts and trade. It brings distant countries into closer connection with India and materially helps in the development of new industries and in the promotion of the commercial prosperity of India. It attracts the attention of foreigners to the great natural wealth of India and to the benefit derivable from the profitable commerce

which the country presents. It gives an impetus to manufactures suited to India. Such exhibitions will give our people opportunities and facilities of studying the possibilities and avenues of industrial regeneration. In the exhibition, not only imported articles but articles manufactured in the country should be exhibited and it would be found that goods made in India to be equal in quality to those that were imported. Surgical instruments in common use manufactured in India may compare favourably with similar articles of foreign make. The exhibits should be classified—the products of the animal, vegetable and mineral kingdoms. The edible oils, foods and food stuffs, medicinal products, drugs and chemicals should be collected: these should include the cereals, seeds including pulses or peas and nuts, vegetables, tubers, bulbs, roots and stems, fruits, starches, sugars, molasses, condiments and spices. Jams, essences, preserved fruits, pickles, confectionary, animal food stuffs (milk and its products, fish, meat, preserved and dried fish), and mineral food stuffs; salts and edible earths; narcotics and stimulants: tea, coffee, cocoa, tobacco, spirits, toddy and wine, opium; drugs comprising indigenous drugs and poisons, cinchona and its alkaloids; soaps and perfumery. There should also be collected appliances connected with sanitation and hygiene, surgical instruments—ancient and modern, splints, hospital appliances, ambulances, drainage material and other objects connected with health and physical education.

As an example let us consider the disease small-pox. We may collect evidences of primitive vaccination and inoculation among the different nations of the world. The materials illustrating the subject may be shown at the exhibition: the instruments used in the operation; methods of operation; gods and goddesses in connection with the

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disease; origin of inoculation; its spread; its practice; its prohibition by law in different countries; origin of vaccination; its spread; its beneficial effects; and the importance of segregation, quarantine, etc.

Primitive Vaccination.—In the November issue of Hygieia in the circular of the International Hygienic Exhibition which was held in Dresden in 1912, we find that vaccination or inoculation, which is commonly regarded as a triumph of modern medical science, has long been practised by the civilized races of Asia, and even by African and other savages probably as a result of Asiatic influence. We first meet inoculation for small-pox among the Chinese. Lockhart gives the following quotation from an old Chinese manuscript, which was probably written early in the fourth century: "The ancients possessed the knowledge of inoculation of small-pox. It has come down to us from the reign of Chua-tsung of the Ling Dynasty, and was discovered by a philosopher. When the disease breaks out spontaneously it is very serious and often fatal but when it is produced by inoculation it is usually mild and does not cause more than one death in ten thousand cases." In Persia inoculation is accomplished by scratching the forearm and rubbing into the slight wound, after bleeding has ceased, the pulverised scurf which falls from a small-pox patient. The Ashantee negroes, according to Bowditch, inoculate in seven places on the arms and legs. The Moors practise this method. The Siamese have the peculiar custom of blowing the scurf into the nose. An interesting collection of materials illustrating this subject was shown at the Dresden exhibition.[1]

The different modes of infection were well known to the Hindus:

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[1] Scientific American, Supplement, 1911, Jan.-June, Vol. LXXI.

प्रसङ्गात् गात्रसंस्पर्शान्निःश्वासात् सहभोजनात् ।
एक शय्यासनाच्चैव वस्त्रमाल्यानुलेपनात् ।
कुष्ठं ज्वरश्चःशोषश्च नेत्राभिष्यन्द एव च ।
औपसर्गिक रोगाश्च संक्रामन्ति नरान्नरम् ॥

Nidāna.

Inoculation for small-pox is still practised to some extent as a protective measure in India, for, as is well known, the mortality from the inoculated disease is much less than from the infective disease, and the form of the disease is milder in the former than in the latter case. Material from a small-pox pustule is taken, mixed with water and introduced under the skin with a lancet. The site for inoculation is the flexor surface of the forearm (Punjab) or the wrist. This practice is of great antiquity in the East. It was introduced into England from Turkey by Lady Mary Wortley Montague in 1763. During the first quarter of this century it was practised in preference to vaccination. Inoculation for small-pox in England was made illegal by Act of Parliament in 1840.[1] Inoculation was declared to be illegal in Ireland by the fourth section of the 'Vaccination Amendment (Ireland) Act of 1868 (31 and 32 Vict., Cap. 87).'

James Moore in his "History of Small Pox, London, 1802," traces the first appearance of the disease in China, on the authority of a Chinese treatise written long before Christ and entitled "Teontahinfa" ("Heart Words on the Small Pox") to the time of the Tsche-u dynasty, or the period between 1122 and 249 B.C. "In a short article on "Small Pox in China" Mr. F. Porter Smith tells us that the disease dates from the reign of the first emperor of the (Eastern) Hun dynasty, Kwang Wu, who reigned A. D. 25-28. Certain it is that inoculation has been practised among the Chinese for a thousand years or more."[1]

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[1] Footnote to the Report of the Leprosy Commission in India (1890-91.),p. 10.

Inoculation has been practised amongst the Chinese from dim antiquity and its origin is lost in mythical genesis. At the present day, as from early times, three methods of the artificial production of small-pox are practised : (*a*) the scab from a dried small-pox pustule after being pulverised, is blown up the nostril ; (*b*) the clothes of a person suffering from small-pox are worn by the person to be infected ; (*c*) the matter from a small-pox pustule is inserted beneath or on the abraded skin."[2]

The operation had been practised from time immemorial in China and also in Persia. The Chinese plan of giving small-pox to persons in health consisted in inserting into the nostrils tents of charpie covered with dried crusts of the variolous eruption. They called the procedure 'sowing the small-pox.' From China and Persia inoculation or 'engrafting' was introduced into Georgia, Circasia, Turkey and Greece. In 1717 a very clever English woman, by name Lady Mary Wortley Montague, wife of the British Ambassador at the Ottoman Court, wrote home glowing accounts of the marvellous results of inoculation as practised at Adrianople, among other persons upon her own son, a boy six years of age. Her influence led to the open adoption of the procedure in England in April, 1721, and two years later, in 1723, Dr. Bryan Robinson, sometime President of the King and Queen College of Physicians, first performed the operation in Ireland. Many years elapsed before it obtained a footing in France, where at first it had been rigorously prohibited

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XXth Century Practice of Medicine, Vol. XIII, p. 391.

B. M. J., 1899, Vol. II, p. 761.

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by law; but in 1756 the children of the Duke of Orleans were inoculated, and in 1758 the practice was introduced into most of the large towns."[1]

In the letter referred to above she writes: "Every year thousands undergo this operation (*i.e.*, inoculation) and the French Ambassador says pleasantly that they take the small-pox here by way of diversion, as they take water in other countries. There is no example of any one that has died in it and you may believe, I am very well satisfied of the safety of the experiment, since I intend to try it on my dear little son."[2]

All exhibitions have an educational value, especially in a country where the mass of the population is illiterate and the women live a secluded life. I quote an extract from the speech delivered at the opening of Convocation by the Hon'ble H. J. Reynolds, Vice-Chancellor of the Calcutta University:—"I speak of the Exhibition to-day," Mr. Reynolds said, "as an educational agency, and as such it cannot but have made an impression even on the most simple rustic, who regarded it with a kind of stolid wonder,—as a mere *jádughur*, a mere palace of magic. The Exhibition is a school which has brought something even to such unpromising pupils as these, and still more it has aroused the interest and quickened the intelligence of the Indian craftsman and citizen. Next, it has been a mighty power in breaking down those traditional habits which in this country seclude the female sex from association with men. No one can have visited the Exhibition without being struck with the number of native ladies who were to be met with in its courts and galleries. Arrangements were made for setting aside certain days and hours for their visits, but this scheme was only partially successful.

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[1] XXth Century Practice of Medicine, Vol. XIII, p. 462.

[2] The Letters and Works of Lady Mary Montague.

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They found that they could enter among the general throng of visitors without being in any way molested or annoyed, and they availed themselves freely of this newly-discovered liberty. I saw it stated not long ago in the papers that nearly 50,000 native ladies had thus visited the Exhibition ; and if this statement is correct, the fact is one of which it would be difficult to exaggerate the importance."

Nothing could be simpler or more effective for the purpose of instruction than such exhibitions. The exhibits dealing with historical matters have great value. They may be devised either to treat of general history of medical science or of historical matters of special local importance. Such an exhibit might be designed either to be complete in itself or to form part of a central exhibition. An exhibit may be permanently centred in a town, where people from various parts of the country resort, or so arranged as to be circulated among cities of more or less importance. Demonstration should be given in conjunction with exhibits. Representations of Āyurvedic dispensaries, and indigenous drug shops in which are collected the various kinds of herbs used for medical purpose, pharmaceutical apparatus and surgical instruments, gods and goddesses of medicine in Indian mythology, method of teaching the students, relation of physician and his patients, charms and talismans fastened round the patients' body in order to protect him from evil spirits, temple sleep as practised in famous temples, religious offerings to gods by the Brahmins for cure of the incurable diseases, etc., may form a most interesting exhibition.

A Health Conference and Exhibition may be held in a manner to appeal to all classes. The simple practical methods of sanitation which are attainable to even the humblest villagers, the practical measures that may be undertaken for child-welfare work for the saving of infants' lives, and the laws of school hygiene to maintain standards of efficient citizenship may be demonstrated and will be highly appreciated by all classes of people. The working programme which follows I have quoted from Mr. Wellcome's classification of Exhibits in the Historical Medical Museum:

CLASSIFICATION OF EXHIBITS

Section 1.—Medicine.

(*a*) Animal medicine; materia medica of the animal creation: traditions concerning the connection of animals with the healing art.

(*b*) Medical deities of savage, barbaric and other primitive peoples; figures, fetishes, charms, implements and other objects associated with the art of healing.

(*c*) Antient deities of healing and other subjects associated with the art of healing by early primitive peoples and the early civilisations.

(*d*) Votive offerings for health (*Donaria*), amulets, amuletic medicines, gems, emblems, talismans, rings, charms and other objects connected with the art of healing.

(*e*) Paintings, drawings, engravings, etchings, photographs, models, bas-reliefs, sculptures and casts of medical interest.

(*f*) Pictures and miniatures from MSS. of all ages, of medical, surgical, pharmaceutical and alchemical interest.

(*g*) Portraits in oil, water-colour or wax, miniatures, silhouettes, etchings and engravings. Sculptured figures or busts of physicians, surgeons, alchemists, botanists, apothecaries, chemists, pharmacists, nurses, etc., of all periods.

(*h*) Pictures of medical, chemical and pharmaceutical institutions of all nations.

(*i*) Pictures representing the important epochs and interesting events, such as original operations, discoveries, etc.,

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in the history of medicine, surgery, chemistry and pharmacy.

(*j*) Medals, medallions, plaquettes and coins of historical medical interest.

(*k*) Rare and curious MSS., xylographs, incunabula, early printed books and works of especial historic interest, periodicals, pamphlets, book-plates, etc., of, and connected with, medicine, surgery, pharmacy, chemistry, botany and the allied arts.

(*l*) Historic letters, prescriptions, autographs, case and note-books, records of experiments, ancient diplomas, licences, corporate insignia, and personal relics of medical, pharmaceutical and chemical interest.

(*m*) Relics of the influence of astrology on medicine, horoscopes, and other astrological diagrams bearing on the art of healing.

Section 2.—Surgery, Dental Surgery, Veterinary Surgery and Anæsthetics.

(*a*) Instruments used in surgery by prehistoric and savage peoples.

(*b*) History and development of instruments and appliances used in surgery from the earliest times.

(*c*) Curious surgical appliances used in antient times; barber-surgeon's bleeding basins and bowls, cupping instruments, etc.

(*d*) Improvised instruments and appliances that have been used in emergencies, especially those that have led to inventions and discoveries.

(*e*) Calculi, and other curious specimens of historical interest.

(*f*) Relics of ancient dentistry; early artificial dentures.

(*g*) Ancient dental instruments and appliances.

(*h*) Ancient instruments used in veterinary surgery.

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(*i*) Historical apparatus connected with the discovery and use of anæsthetics.

Section 3.—Anatomy, Pathology, Obstetrics, etc.

(*a*) Curiosities of anatomy, and curious anatomical models in wax, ivory, etc.

(*b*) History of the nomenclature, causation and treatment of the most important diseases that have afflicted mankind from the earliest times.

(*c*) Obstetric chairs, and other appliances used in early midwifery practice, the lying-in-room in ancient times, models for obstetrical teaching.

(*d*) Manacles and other appliances used in the treatment of the insane in ancient times.

Section 4.—Opthalmic and Philosophical Instruments, etc.

(*a*) Ancient spectacles, eye-glasses and instruments used as an aid to sight.

(*b*) Ancient instruments and appliances used for testing sight.

(*c*) The microscope from the earliest period.

(*d*) Historic microscope.

Section 5.—Hygiene, Public Health and Preventive Medicine.

(*a*) Objects of interest, ancient and modern, connected with public health, preventive and tropical medicine.

(*b*) Masks, and other preventive methods of protection used against plague in ancient times.

(*c*) Exhibits illustrative of physiology, anthropology, microscopy, bacteriology, biology, parasitology and geography.

(*d*) Placards, posters, manifestos, declarations concerning health and disease, etc.

(*e*) Ancient bills of health.

Section 6.—Pharmacy.

(*a*) Ancient pharmacies.

(*b*) Materia medica of all ages, specimens of ancient medicines and remedial agents of various periods.

(*c*) Specimens illustrating the use of animal substances in medicine.

(*d*) Early and curious relics of pharmacy.

(*e*) Ancient stills, alembics, mortars and pharmaceutical apparatus.

(*f*) Specimens illustrating the history of early pharmaceutical preparations.

(*g*) Curious bottles, carboys, ointment and specie jars, drug vases, pots, ewers, mills, containers, and implements and appliances used in pharmacy.

(*h*) Scales, weights and measures of all ages.

(*i*) Ancient prescriptions and curious pharmaceutical recipes and recipe books.

(*j*) Ancient prescription books and price lists.

(*k*) Ancient counter bills, labels, business cards, curious advertisements and trade tokens.

(*l*) Old travellers' note-books and curious orders.

(*m*) Ancient apothecaries' shop signs and early fittings, early pharmaceutical preparations and specimens of obsolete and curious medical combinations.

(*n*) Ancient and modern medicine chests, civil, military and naval.

Section 7.—Chemistry and Botany.

(*a*) Alchemists' laboratories.

(*b*) Ancient still, and apparatus used by early alchemists.

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(*c*) Historical apparatus used by famous discoverers.

(*d*) Products and preparations, ancient and modern, of chemical and scientific research.

(*e*) First specimens of rare alkaloids, and other preparations made by their discoverers.

(*f*) Rare elements and their salts, etc.

(*g*) Curious astrological, magnetic and early electrical appliances.

(*h*) Ancient herbaria.

(*i*) Specimens of abnormal plant forms and curious roots used in medicine.

(*j*) Relics of famous botanists.

Section 8.—Hospitals, Nursing, Ambulance, Dietetics and Alimentation.

(*a*) Objects connected with early hospitals and general nursing.

(*b*) Early appliances used in nursing the sick.

(*c*) Ancient bed-bottles, urinals and bed-pans.

(*d*) Naval and military nursing, ambulance appliances and equipments.

(*e*) Relics and objects of interest associated with nurses.

(*f*) Relics of foundling hospitals.

(*g*) Ancient methods of grinding corn, baking and cooking.

(*h*) Curious articles of food and culinary implements.

(*i*) Methods of infant and invalid feeding in all ages. Historic menu-cards.

Section 9.—Toxicology and Criminology.

(*a*) Specimens of rare and curious poisons.

(*b*) Historical objects connected with famous poisoning and other criminal cases.

(*c*) Curious methods of torture and execution.

(*d*) Improvised instruments used for criminal purposes.

Section 10.—Quackery.

(*a*) Ancient and modern pictures, prints and relics of notorious quack doctors.

(*b*) Ancient and modern specimens of quack medicines, preparations and appliances.

(*c*) Old bills, placards and pamphlets referring to quack medicines.

Section 11.—Adulteration of Foods and Drugs.

(*a*) Specimens showing the adulteration and falsification of drugs, medicines, foods, fabrics and other articles affecting health, or associated with medicine, pharmacy and allied sciences.

Section 12.—Photography.

(*a*) Objects illustrating the invention and history of photography.

(*b*) Early cameras and apparatus.

(*c*) Daguerrotypes.

(*d*) Portraits of the pioneers of photography.

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(*e*) Original papers and MSS. connected with photography.

(*f*) Application of photography to medicine and surgery, X-ray photography.

(*g*) Early and rare apparatus.

(*h*) Curiosities of photography and its latest developments.

3. *A scientific library for India.*—At present we have no good modern scientific library in India. A good library is, however, indispensable to the disciples of Esculapius. The votary of science needs his library as well as his laboratory for the advancement of his department of research.

"During the past dozen years from time to time complaint has been heard of the need of a library of scientific books and periodicals for India. At present we cannot be said to have any such thing as a good modern scientific library in India. What indeed have we in the way of medical libraries? We only know of the useful collection of books in the office of the Director-General in Simla. This consists of a large number of old volumes, of many bound sets of medical periodicals, and a good collection of modern books on the various branches of medical science, but these cannot be of use to the worker in India, they are necessary as works of reference for the Director-General himself. Doubtless the Pasteur Institute has by now a fair collection of modern periodicals and books on bacteriology. In Calcutta there is a Medical College Library for the use of the staff and the students, good as far as it goes, and there is a fair collection of old and new books in the office of the Inspector-General of Civil Hospitals, which books are available for use of Civil Surgeons in Bengal.

"The Asiatic Society of Bengal has a fine collection of scientific books and especially periodicals, but the proportion of medical periodicals is very small and naturally so, as this great Society, though largely supported by medical officers, is in no sense a medical or even only a scientific society.

"We have no exact information as to the resources of Madras and Bombay or Lahore, no doubt all the Medical Colleges have useful libraries for the use of their staff and students.

"Something more than this is badly needed in India. A Central Medical Library containing all books of reference, periodicals relating to the medical sciences is what we need. Such a library should be centrally situated, it should consist of two parts, a library of reference and a circulating library. It should be in charge of a paid librarian, who should know sufficient of French and German to hunt out references, and if need be translate passages for workers requiring references.

"The circulating library should possess several copies of all the best modern books on medicine, surgery and allied sciences, these should be available for medical officers all over India. An annual fee should be charged for the use of the library of small amount, and a deposit should be exacted against the value of books lent. There should be strict rules for the return and proper packing of books lent, and a limited period put as to the number of days or weeks a book lent out should be kept by the reader.

"A nucleus of such a library would be obtained by the transfer of many books from some of the small libraries above-mentioned.

"Let us glance for a moment at the establishment of the library at Manila. This library commenced with a nucleus of only fifty books in July, 1902; by May 1905 it contained 17,350 volumes. This consists of 250 periodicals in all branches of science, of the latest editions of scientific books published in Europe and America, copies of reports, etc. At first the library was to be for reference only, but owing to a growing demand at the beginning of 1904, arrangements were completed by which all persons employed in the various departments of Government might take out 'borrowers' cards' subject to the provision of certain rules. A catalogue has just been published by Miss Mary Polk, the Librarian, and the library is now in a position of great usefulness, and the worker in Manila no longer feels the isolation and want of books of references which so greatly hinders the worker in the tropics."[1]

An increase of books in the library should be constantly kept in view, and an attempt should be made to procure as perfect and extensive a series as possible of the transactions and proceedings of all the learned medical societies which now exist or have existed in different parts of the world. The catalogue of serial publications of learned societies, state governments, universities, public and private libraries should be collected. Letters should be sent to all the societies with a request that deficient series of volumes or parts of volume be supplied and books which are not to be found in the Catalogue of the Library be furnished from duplicates at the disposal of the different libraries of the world.

The medical periodicals save us a vast expense which would otherwise be incurred for procuring many expensive works. In these periodicals we may read the lectures and opinions of the celebrated medical men of the civilised countries, and thus come into close contact with an influence of the great pioneers of science;—the personal magnitude of a great mind acts as an incentive to future discovery.

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[1] I. M. G., October 1905, p. 387.

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The library should contain the best systematic monographic and elementary works in different languages. It should keep alive the interest of the average readers in books. In selecting books for purchase, preference should be given to monographs and periodicals which have reference to tropical climate. Always remember the remarks of Lord Avebury: "It is one thing to own a library; it is quite another to use it wisely." The library should have a fair collection of Old English and Oriental medical literature whether in European or Oriental languages. The librarian should not only be a book-lover but an erudite and discriminating student of medicine, ever ready to help the authors of any recent contributions on their subjects with necessary materials which may be of good service. All photographs, negatives, maps, charts, and drawings should form part of the library. The members should testify their liberality and taste by voluntary contributions to the library, in the shape of rare and important monographs and volumes of standard medical works of reference. The Stillé Library of the University of Pennsylvania is a monument to his love of the literature and history of the science of medicine. Such a library would be a great boon to the medical profession not only of Calcutta, but of more wide areas and will be the means of bringing all sections together in friendly union. Interesting collections of books may be purchased—especially of erudite medical scholars. In Europe such collections often secure good prices. As an instance I quote here remarks on the sale of a famous collection of a medical antiquarian.[1]

"During the week Messrs. Knight, Frank, and Rutley have held an interesting sale, at their Auction Galleries in Conduit Street, of books, engraved portraits, manuscripts,

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[1] B. M. J., Aug. 26, 1905, p. 449.

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engravings, and antiquities, formerly the property of Thos. J. Pettigrew, F.R.S., F.S.A. (1791-1865). The sale was by order of the executors of a descendant, in whose possession the collection had remained since the death of the well-known surgeon and antiquarian in 1865. The fact that forty years had passed added interest to a collection which represented the life-work of a man who played no small part in advancing medical and antiquarian knowledge in the earlier part of the last century. In spite of the holiday season the sale attracted a large attendance, and good prices were obtained. The catalogue contained 260 lots, of which nearly half were books, pamphlets, and manuscripts. The first five lots were the earlier volumes of the *Journal* of the British Archæological Association, in which Pettigrew took a leading part from its foundation in 1843. He acted as its treasurer, and some of the earlier meetings were held at his house. There were several works illustrated by George Cruikshank, in their original paper covers, and bearing the autograph and inscription of the artist to his contemporary and friend, Pettigrew, for whose work on the *History of Egyptian Mummies*, published in 1834, Cruikshank drew the coloured plates. Of this work an important remainder was sold. The original drawings for the coloured plates were included amongst the drawings and engravings. The most important item amongst the books was Lot 76, *Gulielmi Harvei Exercitatio anatomica de motu cordis et sanguinis in animalibus, Francofurti, 1628,* first edition. This small and brief pamphlet, not exceeding in length an average medical lecture or address, realized £30. The catalogue included remainders of some of the well-known works with which the name of Pettigrew is associated, such as the *Bibliotheca Sussexiana*, of which the first volume appeared in 1827 and the second in 1839; Pettigrew's *Medical*

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Portrait Gallery : Lucien Greville with George Cruikshank's etched illustrations, 1833. The collection of engraved portraits of physicians, surgeons, and medical writers, chiefly of the latter part of the eighteenth and the beginning of the nineteenth centuries, realized upwards of £50. It included three portraits of Edward Jenner: an impression of the three-quarter length, of the doctor leaning against a tree, drawn and engraved by J. Smith, was sold for £5 15*s.*; and two others, one by W. Sharp and W. Skelton, after Hobday, in proof state, and the other by W. Say after Northcote, realized £7. There were several portraits which recalled Pettigrew's connexion with the Medical Society of London and the Royal Humane Society, notably those of Lettsom and the Duke of Kent, of which the original copper-plates, engraved by Skelton, were sold. It was through the influence of Lettsom that Pettigrew became Secretary to the Royal Humane Society, and it was there that he made the acquaintance of the Duke of Kent, who appointed him surgeon extraordinary, and subsequently surgeon in ordinary to himself and the Duchess of Kent. In that capacity he vaccinated their daughter, the late Queen; the lymph was obtained from one of the grandchildren of Lettsom. The Duke of Kent brought Pettigrew under the notice of the Duke of Sussex, and the latter made him surgeon in ordinary and also librarian to Kensington Palace, so that indirectly the influence of Lettsom led to the compilation of the *Bibliotheca Sussexiana*. Amongst the miscellaneous engravings, Lot 177—a set of four relating to the *Victory*—realized £7 10*s.*, and were of interest as recalling the fact that Pettigrew's father was a naval surgeon and served in the *Victory*."

The librarian should always bear in mind, that the call to-day was for a greatly improved library service, and

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that one of his functions was to direct the public taste for books, so that the people might learn to distinguish what was good, original and sound from what was futile and useless. The main purpose of a library was to meet the intellectual needs of the students after they had done with their purely academic studies.// But he should on no account throw away books which seems to him useless. Dr. Arthur Ernest Cowley, Librarian of the Bodleian Library, Oxford, one of the chief speakers at the Conference of the Library Association which concluded at Cardiff recently, said that at the Bodleian Library they got rid of nothing. Whatever they received was deposited there for all time, and it would be dangerous, even if they had the power, to discard or to refuse to receive anything. "For instance," he said, "when the First Folio of Shakespeare was sent to us in 1623 we received the copy in sheets and bound it. In 1664 we had a newer edition. This was therefore thought a better edition, and so the first folio was sold probably for a very few shillings. All trace of it was lost for 240 years, until in 1905 it unexpectedly emerged from a country-house library and was identified with complete certainty. It was then bought back by the Library for £3,000."

The teachers should encourage their students to undertake research in the public libraries. It is desirable that the librarian should be a member of our profession, otherwise it would be difficult for him to help scholars to learn anything from the history of medicine in any of its branches. The Libraries of the Calcutta Medical College and Carmichæl Medical College, I am sorry to remark, have not been, but should be placed, in charge of scholars who have been well-informed physicians.

4. *Lectures.*—Popular lectures on subjects of historical interest may be arranged for illucidation of historical

truths. A series of lectures may be delivered as regards the history of medicine in various countries as medicine men existed in all countries: the medicine in India, Egypt, Babylon, Assyria, Greece, Rome, Arab, China, Japan, etc. The relation of priest and physician offered interesting studies. The medical ethics—its rise and progress—and its present position among professional men may be dilated upon in a series of lectures. As regards the history of medicine in Britain, the Fitz-Patrick Lectures are replete with information on medical study in London during the Middle Ages, English medicine in the Anglo-Saxon times, the Arabian medicine, and other interesting subjects. The Harveian Orations deal with important historical studies: the relation of Harvey to his great predecessor Galen; appreciation of the works done by his companions and contemporaries; commemoration of the good deeds and the munificence of the founder, benefactors and donors of the Royal College of Physicians. Lectures on the history of medicine may deal with the general study of its philosophy, the exposition of various theories which have been used in by-gone ages, the lives and works of ancient physicians, and the epidemics of past ages: these informations cannot but be instructive and useful to us.

5. *Pictures and Drawings.*—The aid of pictorial representation in studying history of medicine may here be best shortly adverted to. A collection of portraits, etc., are essentially necessary for a systematic study of the subject. Who does not like to see the features of eminent surgeons and physicians—the real benefactors of human race! So we should preserve the likeness of such men. Pictures of ancient hospitals, pharmacies, dispensaries, surgical operations, surgical instruments and appliances, and ambulance equipments should be collected from

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different countries of all ages and scientifically studied with reference to evolution of medical knowledge. It has been said: "A few scratches with a pen are better than whole pages of the most elaborate description"—*Mrs. Jameson, Legend of the Madonna.*

"Segnius irritant animos demissa per aurem
Quam quæ sunt oculis subject fidelibus."

Hor. Epist. ad Pisones, l. 180.

"Things by the ear received, men's minds excite
Much less than when submitted to the sight;
For the spectator with his trusty eyes,
To his own mind impression best applies."

Translation by Andrew Wood, M.D.

The importance of illustrations in books of medical science is apparent to the students of medicine. The pictorial representations of "Domestic Sanitary Defects"—a book by T. Aridgin Teale, M.A., Surgeon to the General Infirmary, Leeds, shows at a glance every important fault to which domestic sanitary arrangements are liable. The disastrous effects of small pox, the benefits of vaccination, the good effects of pure air and water, ventilation of dwelling houses, school buildings, barracks, etc., may be better shown by wall diagram, pictures, and magic-lantern slides than by written descriptions. To help students in their study of history of medicine various devises may be improvised. As an example, let me mention the *Historischer-Medicinal Kalendar* :

A MEDICAL ALMANACK: "This almanack is printed in 183 sheets, to be torn off every other day as the year advances. Professors PAGEL and SCHWALBE have clearly devoted much care to their *Historischer-Medicinal Kalendar.*[1] Each sheet, about 9 inches in length and over 3 inches in breadth, bears at the foot the dates of two consecutive days, with the usual astronomical and ecclesiastical notes. The middle of the page is devoted to short notices of the medical worthies of every age who began or ended their careers on the corresponding days, British authorities being duly honoured. The text also includes notes on medico-historical events, quotations from standard authors on medicine and doctors, and pieces of folk-lore. The essential feature of this almanack is an illustration at the head of the page. Several collections have been laid under contribution; the reproductions of the Dutch school of the seventeenth century are exceedingly good, so are the copies of yet older woodcuts from medical works of the Paré type. There remains a considerable proportion of facsimiles of medals commemorating the cholera at Hamburgh, the visit of Napoleon III and Eugénie to a cholera ward, the Red Cross Union and others less pleasing, and of the character rated by second-hand booksellers as "curios." The elaborate medal representing literally the figurative purgation of Louis XIV by the Pope and the Bey of Tunis would seem to show how that monarch was hated outside his own kingdom, until we find a similar work of art bearing the figures of Louis, Marlborough, and Eugene under the influence of a drastic judge, an unsavoury metaphor expressing the relief felt by all concerned when the Peace of Utrecht was signed."

The portraits of some of the professors of the Calcutta Medical College have been collected in the college; but the

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[1] *Spemann's Historischer-Medicinal Kalendar, 1905.* [Spemann's Historico-Medical Almanack for 1905.] Bearbeitet von Professor Dr. J. Pagel und Professor Dr. J. Schwalbe in Berlin. Berlin and Stuttgart; W. Spemann. (M. 2.)

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portraits of ex-students of the college who have made their names famous in their country are to be found nowhere. The lives of the alumni of the college should be narrated in a Roll of the College with their portraits. The Annual Medical list as published under the direction of the Bengal Council of Medical Registration persuant to sub-section (1) of section 32 of the Bengal Medical Act, 1914, supplies us with the qualifications of the physicians and surgeons, but it gives us no information as regards the work done by them in the domain of special subjects followed by them.

It is unnecessary to dilate this Introduction any further. I conclude it with the remarks[1] of Adams: "Surely every age ought to endeavour to benefit by the experiments, whether successful or otherwise, of all preceding ones; instead of every generation commencing a new series of trial, and wandering over the same ground in search of truths which had been long ago discovered; or in stumbling through the mazes of error without regarding the beacons set up by their forefathers to direct the footsteps of their descendants. If the wisdom of antiquity be entitled to high reverence in any case, it surely is so in medicine, founded as this art especially is on general observation and experience."

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[1] Paulus Aegineta, Vol. I, Sydenham Society's Publications, p. vii.

APPENDIX I

PROGRESS IN INDIGENOUS MANUFACTURE.

Medicines Available in Large Quantities.

"A noticeable feature in Calcutta in recent years has been the remarkable progress made in the manufacture of drugs and pharmaceutical preparations out of indigeneous materials. Thus it is now found that many of the dispensaries large and small, private and State, are largely using locally-procured medicines and drugs in preference to those imported from other countries. This change is due to the strong advocacy, by well-known medical men, Indian and European, for the development of this branch of local industry and the whole-hearted co-operation by the Government in this direction. Prominent members of the Indian Medical Service and well-known scholars of scientific research pointed out to the Government and the people the necessity for this industry from financial and other considerations.

Among Indians, those who were advocates of a more extended substitution of locally-procured drugs held that the advantage might not be so much in the financial saving to the country as in the more extended use of serviceable drugs. No one who had looked into the question of the remedial agents sold in the village drug-shops could doubt that many, in fact the majority, were worse than useless. The few that were good were neglected and largely so because of the cry for imported drugs and it was a frequent complaint that European pharmacy was obliterating all knowledge of the time-honoured drugs of this country. There was an awakened interest in the subject of India's indigenous drugs and monumental works by an army of European savants replete with particulars regarding the drugs of India gave the results both of personal investigation and of a laborious enquiry into recognised sources in the contemporary medical world. With the establishment in India of Universities and medical schools where European medical science was taught there soon arose an army of pupils, not unworthy of their masters. And their labours in the field of pharmacology coupled with the sympathy of well-known members of the Indian Medical Service gave an impetus to the investigation the possibilities of indigenous medical drugs.

In 1918 the Board of Scientific Advice accepted a proposal for the formation of a Drugs Manufacture Committee to investigate the possibilities of the cultivation of medicinal plants in India and the manufacture of drugs from them on a commercial scale. The Government of India acted on this recommendation and appointed a committee whose primary functions will be to investigate. The possibilities of the cultivation of medicinal plants in India and (2) the manufacture of drugs from them on a commercial scale. And it was also proposed that the committee should consider the various lines on which the investigation can best be undertaken and also the present position as regards the manufacture of drugs in India from indigenous products and the Indian requirements of such drugs as have hitherto been imported from abroad. As soon as experience has proved that any drug can be manufactured at Government Medical Store Depôts at a sufficiently low cost, private enterprise will be invited to undertake its manufacture. It is learnt that considerable progress has now been made and that several articles

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which before the war were imported, are now being manufactured in India.

Although much yet remains to be done before the resources of India can be fully utilised in the production of drugs, the following list of articles which are wholly or in part derived from Indian sources shows that some appreciable progress has been made. These articles are; Absolute Alcohol, Acids—Hydrochlroic, Nitric and Sulphuric—Alum, Ammonia, Argenti Nitras, Caffeine, Calcium Carbonite, Calcium Chloride, Calcium Phosphate, Castor Oil, Collodion, French Chalk, Glucose, Kerasine Solution, Lysol, Magnesium Carbonate, Magnesium Sulphate, Morphia, Oleic Acid, Oils of Linseed, Dill, Cloves, Carraway, Cedarwood, Croton, Sandalwood, Theobroma, Eucalyptus and Turpentine; Pharmaceutical preparations of Aloes, Asafœtida, Belladonna, Benzoin, Cinchona, Colocynth, Digitalis, Hyoscyamus, Indian Hemp, Liquorice, Nux Vomica, Opium and Squills; Plaster of Paris, Potassium Carbonate, Prepared Chalk, Pyroxylin, Rectified Spirit, Soft Soap, Sodium Arsenite, Sodium Carbonate, Sodium Chloride (chemically pure), Sodium Nitrate, Sodium Phosphate. Sodium Sulphate, Starch, Sulphate of Iron, Talc, Tannic Acid and Thymol.

Many of the above have been manufactured in India for the first time and are now available for sale in large quantities."—*The Englishman, October 11, 1922.*

NOTICES,
BIOGRAPHICAL AND BIBLIOGRAPHICAL,
OF THE
AYURVEDIC PHYSICIANS
AND THEIR WORKS ON MEDICINE

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History of Indian Medicine

CHAPTER I

BRAHMĀ

The Hindus believe the science of medicine to be of divine origin. In the Ṛgveda,[1] we find a verse addressed to god Rudra: "I hear thou art the best of physicians." He is also described as "the depositary of all sciences," and "the possessor of healing medicines." In the Yajurveda, he is referred to as "the first divine physician"[2] "who drives away all diseases." In the Atharvaveda, we find: "(The god) that has caused (disease) shall perform the cure. He is himself the best physician. Let him indeed, the holy one, prepare remedies for thee, together with the (earthly) physician."[3]

Brahmā, the first member of the Hindu triad, was the propounder of the healing art—the Āyurveda or the Science of Life. It is said to be an Upaveda of Ṛgveda.[4]

Dhanvantari, however, taught Suśruta that it had been composed by Brahmā as a sub-division of the

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[1] भिषक्तमम् त्वा भिषजां शृणोमि। II. 7. 16.

[2] प्रथमो दैव्य भिषक्। Ch. V.

[3] AV. II. 9. 5. Bloomfield's Translation.

[4] ऋग्वेदस्यायुर्वेद उपवेदः। Carana Vyūha by Vyāsa.

Atharvaveda before he created the animated beings. It consisted of a hundred thousand ślokas or verses, divided into a thousand chapters. But considering the short span of life and inadequate intelligence of man he recast the book into eight divisions as follows[1] :—

1. Śalya Tantra or Major Surgery : This part deals with the description and uses of the various surgical instruments and appliances, the preparation and properties of caustics and actual cautery, the methods of removing foreign substances introduced into the body from outside, as grass, wood, stones, sand, iron, earth, bones, hair, nails, or formed inside the body, as pus, blood, etc., also the fœtus within the womb and the diagnosis of inflammatory swellings.[2]

2. Śālākya Tantra or Minor Surgery : It treats of diseases of parts of the body situated above the clavicles, such as the diseases of the eyes, nose, mouth, ears, etc., and their treatment.[3]

3. Kāya Cikitsā or Medicine : It deals with the inner medicine, *i.e.*, the constitutional diseases of the body such as Fever, Diarrhœa, Hæmorrhage, Consumption, Insanity, Epilepsy, Leprosy, Urinary disorders, etc., and their cures.[4]

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[1] इह खल्वायुर्वेदो नाम यदुपाङ्गमथर्ववेदस्यानुत्पाद्यैव प्रजाः श्लोकशतसहस्रमध्यायसहस्रञ्च कृतवान् स्वयम्भूः। ततोऽल्पायुष्ट्वमल्पमेधस्त्वञ्चावलोक्य नराणां भूयोऽष्टधा प्रणीतवान्। तद्यथा। शल्यं शालाक्यं कायचिकित्सा भूतविद्या कौमारभृत्यमगदतन्त्रं रसायनतन्त्रं वाजीकरणतन्त्रमिति। S. S. I. i.

[2] तत्र शल्यं नाम विविधतृणकाष्ठपाषाणपांशुलोहलोष्ट्रास्थिबालनखपूयास्रावान्तर्गर्भशल्योद्धरणार्थं यन्त्रशस्त्रक्षाराग्निप्रणिधानव्रणविनिश्चयार्थञ्च। *Ibid.*

[3] शालाक्यं नाम ऊर्द्ध्वजत्रुगतानां रोगाणां श्रवणनयनवदनघ्राणादिसंश्रितानां व्याधीनामुपशमनार्थं। *Ibid.*

[4] कायचिकित्सा नाम सर्वाङ्गसंश्रितानां व्याधीनां ज्वरातिसाररक्तपित्तशोषोन्मादापस्मारकुष्ठमेहादीनामुपशमनार्थं। *Ibid.*

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4. Bhūta Vidyā or Demonology: It dictates the rules to be observed in performing the various religious procedures, in offering sacrifices to the gods and in conciliating the planetary influences, etc., in order to cure the mental derangements due to being possessed by a Deva, or an Asura, or a Gandharva, or a Yakṣa, or a Rākṣasa, or a Pitṛ (any ancestral spirit), or a Piśāca, or a Nāga.[1]

5. Kaumārabhṛtya or the Science of Pædiatrics: It treats of the management of infants and advises us as to the means of rectifying the morbid conditions of milk of the wet-nurses and of curing various diseases caused by unwholesome milk and planetary influence.[2]

6. Agada Tantra or Toxicology: It deals with the methods of diagnosis and treatment of the poisonous bites of snakes, insects, spiders, scorpions, mice, etc., and with the means of curing patients suffering from poisoning due to an incompatible combination of food.[3]

7. Rasāyana or the Science of Tonics: It treats of medicines which preserve youth, prolong life, promote intelligence and strength, and give power to resist diseases.[4]

8. Vājikaraṇa Tantra or the Science of Aphrodisiacs: It treats of remedies for increasing the quantity of semen when it is scanty, rectifying its morbid conditions, revigorating when it is wasted, regenerating its losses, and also for stimulating sexual desire.[5]

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[1] भूतविद्यानाम देवासुरगन्धर्व्वयक्षरक्षःपितृपिशाचनागग्रहाद्युपसृष्टचेतसां शान्तिकर्म्मबलिहरणादि ग्रहोशमनार्थं। S. S. I. i.

[2] कौमारभृत्यं नाम कुमारभरणधात्रीक्षीरदोषसंशोधनार्थं दुष्टस्तन्यग्रहसमुत्थानाञ्च व्याधीनामुपशमनार्थं। *Ibid.*

[3] अगदतन्त्रं नाम सर्पकीटलूतावृश्चिकमूषिकादिदष्टविषव्यञ्जनार्थं विविधविषसंयोगविषोपहतोपशमनार्थं। *Ibid.*

[4] रसायनतन्त्रं नाम वयःस्थापनमायुर्मेधाबलकरं रोगापहरणसमर्थञ्च। *Ibid.*

[5] वाजीकरणतन्त्रं नाम अल्पदुष्टविशुष्कक्षीणरेतसामाप्यायनप्रसादोपचयजननिमित्तं प्रहर्षजननार्थञ्च। *Ibid.*

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In the Caraka and Suśruta Saṁhitās, Brahmā is said to be the originator of medical science. This belief in the divine origin of medical knowledge was shared also by other nations, in ancient times. The Egyptian priests believed that Thoth was the inventor of science in general. The authorship of the oldest Egyptian works on medicine is ascribed to him. The works of Thoth were ultimately incorporated into the so-called Hermetic Books, six of which treated of medicine, anatomy and cure of diseases. The King Osiris and his son Horus, the Egyptian sun-god, are also reputed as inventors of medicine. Thoth, Osiris and Horus may be compared with Brahmā, Dakṣa and Sun (Bhāskara) as inventors of the Art of Healing. The Egyptian Thoth was known to the ancient Greeks as Hermes, and "Greek scholars trace the Greek Hermes to an Indian source, and assume the existence of two gods of the same name."[1]

Le Clerk traces the origin of the science of medicine as far back as the time of Adam, the title of his fourth chapter being " Le Premier Homme a été, en certain sens, le premier Médicin." If we carry the history still further back, we are drifted on the table-land of legend—a land enveloped in impenetrable mist and darkness, a land of unrealities, like Chaos.

In Greek literature, the earliest allusion to the healing art is found in Homer, who represents it as derived from the gods. Horus was identified by the Greeks with their Apollo, and to him the discovery of the science of medicine is attributed.[2] The Greeks also traced the origin of the healing art to Asclepius, a deified son of Apollo.

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[1] Wootton, Chronicles of Pharmacy, Vol. I, p. 5.

[2] Inventum medicina meum est, opiferque per orbem,
Dicor; et herbarum subjecta potentia nobis.
Ovid.

The concurrent testimony of all the ancient nations supports the divine origin of the science. The belief is confirmed by Hippocrates (Liber de Vet. Med.), and by Cicero ("Deorum immortalium inventioni consecrata est ars medica."—Tusc. Lib. iii).

Wootton quotes some passages from the Ecclesiasticus: "The Lord hath created medicines out of the earth and he that is wise will not abhor them, etc.," and concludes: "The idea that physicians get their skill direct from God is prominent in these passages and is perhaps truer than we are willing to admit in this age of curricula and examinations."[1]

Dr. Ryan[2] remarks :—"All medicine is derived from God, and without his will it cannot exist or be practised. Hence the healing art, if disunited from religion, would be impious or nothing. Illness requires us to implore the Deity for assistance and relief, and humbles human pride. The seeds of the art, the wonderful cures, and the powers of remedies, are in the hand of God. He has beneficently supplied various remedies, and pronounces with our tongues, the fate, life and death, of man. Whence, we see the dignity of medicine, and what reverence is due to the Divine Author of it. Sacred history confirms this sentiment, "Every cure is from God." "The Most High created medicines out of the earth." Every thing we enjoy are the gifts of God : none but the impious ever doubted this truth ; none but fools dared to deny it.

"It is recorded that Jesus, the son of Sirach, was one of the first who attributed the origin of medicine to the Deity. And we also read in Scripture, 'Honour the physician for the need thou hast of him, for the Lord hath created him.'

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[1] Wootton, Chronicles of Pharmacy, Vol. I, p. 48.

[2] Dr. Ryan, Medical Jurisprudence, 2nd ed., 1836, pp. 3-4.

"'All medicine is from God, and without him it cannot exist or prosper; our art, disunited from religion, is either impious or nothing.'[1] Such is the first precept in the moral statutes of the Italian Universities, and it is that of Roderic a Castro, in his Medico-Politica, and of the profession in all countries.

"The fate of the sick and the success of medicines are in the hand of the Deity: 'in him we live, move, and have our being'; and our curative means, and our knowledge of the nature and treatment of diseases, are subservient to his divine will and pleasure."

MSS. of Āyurveda:—Bik. Cat. 1382, 1383. Āyurveda Rasāyana: But the colophon इति हेमाद्रिटीकायामायुर्वेदरसायने, etc., proves it beyond doubt, to be a commentary by Hemādri.

References:

1. Srśruta Saṁhitā, I. i.

2. Bower MS. (where he teaches the Aśvins about the Chebulic Myrobolana).[2]

3. Gada Nigraha,[3] Vol. II, p. 675, Harītakī kalpa.

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[1] "Omnis medicina a Deo est. Cœlitus delapsa non sine Dei consilio vivit agitque. Hinc ars nostra sine religione, vel impia vel nihil."—La Politica del Medico nell' esercizio dell' arte sua. Dal celebre Alessandro Knipps Macoppe, Professore di Medicina nell' J. R. Università di Padova. Milano, 1826.

[2] Hoernle's Ed., Ch. XI, p. 164.

[3] सुखोपविष्टं ब्रह्माणमश्विनौ वाक्यमूचतुः ।
कुतो हरीतकी जाता कतिजातिश्च कीर्त्यते ।

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एतत्सर्वं यथापृष्टं भगवन् वक्तुमर्हसि ।
अश्विनोर्वचनं श्रुत्वा ब्रह्मा वचनमब्रवीत् ॥

4. He is also referred to in the Brahma Vaivarta Purāṇa[1] as the originator of the medical science from the four Vedas.

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[1] ऋग्यजुः सामाथर्व्वाख्यान् दृष्ट्वा वेदान् प्रजापतिः ।
विचिन्त्य तेषामर्थञ्चैवायुर्व्वेदं चकार सः ॥
कृत्वा तु पञ्चमं वेदं भास्कराय ददौ विभुः ।
स्वतन्त्रसंहितां तस्मात् भास्करश्च चकार सः ॥
भास्करश्च स्वशिष्येभ्य आयुर्व्वेदं स्वसंहिताम् ।
प्रददौ पाठयामास ते चक्रुः संहितास्ततः ॥
तेषां नामानि विदुषां तन्त्राणि तत्कृतानि च ।
व्याधिप्रणाशवीजानि साध्वि मत्तो निशामय ॥
धन्वन्तरिर्द्दिवोदासः काशिराजोऽश्विनीसुतौ ।
नकुलः सहदेवोऽर्किंश्च्यवनो जनको बुधः ॥
जावालो जाजलिः पैलः करथोऽगस्त्य एव च ।
एते वेदाङ्गवेदज्ञाः षोड़श व्याधिनाशकाः ॥
चिकित्सातत्त्वविज्ञानं नाम तन्त्रं मनोहरम् ।
धन्वन्तरिश्च भगवान् चकार प्रथमे सति ॥
चिकित्सादर्पणं नाम दिवोदासश्चकार सः ।
चिकित्साकौमुदीं दिव्यां काशिराजश्चकार सः ॥
चिकित्सासारतन्त्रञ्च भ्रमघ्नञ्चाश्विनीसुतौ ।
तन्त्रं वैद्यकसर्व्वस्वं नकुलश्च चकार सः ॥
चकार सहदेवश्च व्याधिसिन्धुविमर्द्दनम् ।
ज्ञानार्णवं महातन्त्रं यमराजश्चकार ह ॥
च्यवनो जीवदानञ्च चकार भगवानृषिः ।
चकार जनको योगी वैद्यसन्देहभञ्जनम् ॥
सर्व्वसारं चन्द्रसुतो जावालस्तन्त्रसारकम् ।
वेदाङ्गसारं तन्त्रञ्च चकार जाजलिर्मुनिः ॥

5. Aṣṭāṅga Hṛdaya Saṁhitā, I. i.[1]

6. Bhāva Prakāsa, I. i.[2]

7. He is also mentioned in Vraṇa Cikitsā Granṭha as to have introduced, horn, leeches and sharp instruments in medical practice.[3]

Books:

1. Āyurveda: This has been described before.

2. Brahma Saṁhitā: Bhāva Miśra alludes to this work as being composed by Brahmā.

Formulæ ascribed to Brahmā:—

Name	Book		Author
1. Sarvāṅga Sundara Rasa	R. S. S.,	p 109	Brahmā.
2. Vātakulāntaka Rasa	,,	p. 310	,,
3. Caturmmukha Rasa	,,	p. 318	Caturmmukha
4. Āmvāta Gaja Siṁha Modaka	,,	p. 344	Vidhi.
5. Vijayānanda	,,	p. 432	Brahmā.
6. Sūtikāghna Rasa	,,	p. 458	,,
7. Nilkanṭha Rasa	,,	p. 482	,,
8. Mṛtasañjīvana-agada	C. D.,	p. 344	,,
9. Vṛhat Agnimukha Cūrṇa	G. N., Vol. I,	p. 82	,,
10. Vṛhat Sārasvata Cūrṇa	,, ,,	p. 84	,,
11. Candra Prabhā Guṭikā	,, ,,	p. 119	,,

पैलो निदानं कारथस्तन्त्रं सर्व्वधरं परम् ।
द्वैधनिर्णयतन्त्रञ्च चकार कुम्भसम्भवः ॥
चिकित्साशास्त्रवीजानि तन्त्राण्येतानि षोड़श ।
व्याधिप्रणाशवीजानि बलाधानकराणि च ॥

Brahma Vaivarta Purāṇa, Brahmakhaṇḍa, Ch. XVI.

[1] ब्रह्मा स्मृत्वाऽऽयुषोवेदं प्रजापतिमजिग्रहत् ।

[2] विधाताऽथर्व्व सर्व्वस्वमयायुर्व्वेदं प्रकाशयन् ।
स्वनाम्नासंहितां चक्रे लक्षश्लोकमयीमृजुम् ।

[3] शृङ्गं षड़ङ्गुलं रक्तं जलूकम् द्वादशाङ्गुलम् ।
शास्त्रमङ्गुलमात्रवा ब्रह्मणा निर्मितं पुरा ॥

GOML, XXIII, 13242.

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	Name	Book	Author
12.	Sāyambhuva Guggula	G. N., Vol. I, p. 129	Sāyambhuva.
13,	Mācikāsava	„ „ p. 177	Brahmā
14.	Daśasāra Sarpi	Vaidya Grantha, GOML, 13220	„
15.	Karṇāmṛta Taila	Rasa Saṅketa Kalikā, p. 30	„
16.	Sahacara Oil	Bower MS., p. 109	Sāyambhuva.

1. SARVĀṄGA SUNDARA RASA.

सर्व्वाङ्गसुन्दरो रसः ।

शुद्धसूतञ्च गन्धञ्च विषञ्च जयपालकं ।
कटुत्रयञ्च त्रिफला टङ्गणञ्च समांशकं ॥
अस्य मात्रा प्रयोक्तव्या गुञ्जात्रयसमाततः ।
सर्व्वेषु ज्वररोगेषु सामवाते विशेषतः ॥
नाशयेत् श्वासकासञ्च अग्निमान्द्यं विशेषतः ।
ब्रह्मणा निर्म्मितः पूर्व्वं रसः सर्व्वाङ्गसुन्दरः ॥

2. VĀTAKULĀNTAKA.

वातकुलान्तकः ।

मृगनाभिः शिवा नागकेशरं कलिद्रुमजं ।
पारदं गन्धकं जातीफलमेला लवङ्गकं ।
प्रत्येकं कार्षिकञ्चैव श्लक्ष्णचूर्णानि कारयेत् ।
जलेन मर्द्दयित्वातु वटीं कुर्य्याद्विरक्तिकां ।
यथा व्याध्यनुपानेन योजयेच्च चिकित्सकः ।
अपस्मारे महाघोरे मूर्च्छारोगे च शस्यते ।
वातजान् सर्व्वरोगांश्च हन्यादचिरसेवनात् ।
नातः परतरं श्रेष्ठमपस्मारेषु वर्त्तते ।
ब्रह्मणा निर्म्मितं पूर्व्वं नाम्ना वातकुलान्तकः ॥

3. CATURMMUKHA RASA.

चतुर्म्मुखोरसः ।

रसगन्धकलौहाभ्रं समं मृताद्रि हेम च ।
सर्व्वं खल्लतले क्षिप्त्वा कन्याम्बुरसमर्द्दितं ।

एरण्डपत्रैराविष्ट्य धान्यराशौ दिनत्रयं ।
संस्थाप्य च तदुद्धृत्य त्रिफलारससंयुतं ।
एतद्रसायनवरं सर्व्वरोगेषु योजयेत् ।
तद्दयथाग्निवलं खादेद्वलीपलितनाशनं ।
पौष्टिकं वल्यमायुष्यं पुत्रप्रसवकारकं ।
क्षयमेकादशविधं कासं पञ्चविधन्तथा ।
कुष्ठमष्टादशविधं पाण्डुरोगान् प्रमेहकान् ।
शूलं श्वासञ्च हिक्काञ्च मन्दाग्निञ्चाम्लपित्तकं ।
अपस्मारं महोन्मादं सर्व्वार्शांसि त्वगामयान् ।
क्रमेण शीलितं हन्ति वृक्षमिन्द्राशनिर्यथा ।
जगताञ्च हितार्थाय चतुर्म्मुखमुखोदितः ।
रसश्चतुर्म्मुखो नाम चतुर्म्मुख इवापरः ॥

4. ĀMAVĀTA GAJA SIṀHA MODAKA.

आमवातगजसिंहमोदकः ।

शुण्ठीचूर्णस्य प्रस्थैकं यमान्याश्च पलाष्टकं ।
जीरकस्य पले द्वे च धन्याकस्य पलद्वयं ।
पलैकं शतपुष्पाया लवङ्गस्य पलन्तथा ।
टङ्कणस्य पलं भ्रष्टं मरिचस्य पलानि च ।
त्रिवृता-त्रिफला-क्षार-पिप्पलीनां पलन्तथा ।
शठ्येला तेजपत्रञ्च चविकानां पलन्तथा ।
अभ्रं लौहं तथा वङ्गं प्रत्येकञ्च पलं पलं ।
एतेषां सर्व्वचूर्णानां खण्डं दद्यात् गुणत्रयं ।
घृतेन मधुना मिश्रं कर्षमात्रन्तु मोदकं ।
एकैकं भक्षयेत् प्रातर् तच्चानुपिवेत् पयः ।
शूलघ्नो रक्तपित्तघ्नश्चाम्लपित्तविनाशनः ।
आमवातकुलध्वंसी कैशवो विधिनिर्म्मितः ॥

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5. VIJAYĀNANDA.

विजयानन्दः ।

शुद्धसूतस्य भागैकं द्विभागं शुद्धतालकं ।
मृत्कटाहान्तरे पूर्व्वं स्थापयेच्च समन्तकं ।
द्वयोः समं पलाशस्य भस्म तस्योपरि क्षिपेत् ।
वस्त्रं मृत्कर्पटे क्षिप्त्वा शोषयेच्च खरातपे ।
चतुर्व्विंशतियामन्तु पक्त्वा शीतलतां नयेत् ।
अवतार्य्य काचपात्रे स्थापयेदतियत्नतः ।
विधिवत् सेवितश्चासौ हन्ति श्वित्रं चिरन्तनं ।
सर्व्वकुष्ठं निहन्त्याशु भास्करस्तिमिरं यथा ।
रसोयं श्वित्रनाशाय ब्रह्मणा निर्म्मितः पुरा ।
विजयानन्दनामायं निगूढ़ः क्षितिमण्डले ॥

6. SŪTIKĀGHNA RASA.

सूतिकाघ्नोरसः ।

रसगन्धकलौहाभ्रं जातीकोषं सुवर्णकं ।
समांशं मर्द्दयेत् खल्ले छागीदुग्धेन पेषयेत् ।
गुञ्जात्रयप्रमाणेन वटिकां कुरु यत्नतः ।
ज्वरातीसाररोगघ्नः सूतिकातङ्कनाशनः ।
सूतिकाघ्नो रसो नाम ब्रह्मणा परिकीर्त्तितः ॥

7. NILKANṬHA RASA.

नीलकण्ठोरसः ।

सूतकं गन्धकं लौहं विषं चित्रकपद्मकं ।
वराङ्गरेणुकामुस्तं ग्रन्थिलानागकेशरं ।
त्रिकटु-त्रिफला चैव शङ्खभस्म तथैव च ।
एतानि समभागानि त्रिगुणोगुड़ उच्यते ।

रंमर्द्द्य वटकं कृत्वाभक्षयेच्चणकोन्मितं ।
कासे श्वासे क्षये गुल्मे प्रमेहे विषमज्वरे ।
हिक्कायां ग्रहणीदोषे शोथे पाण्ड्वामये तथा ।
मूत्रकृच्छ्रे मूढ़गर्भे वातरोगे च दारुणे ।
नीलकण्ठो रसो नाम ब्रह्मणा निर्म्मितः पुरा ।
अनुपानविशेषेण सर्व्वरोगहरो भवेत् ॥

8. MṚTASAÑJĪVANA AGADA.

मृतसञ्जीवनोऽगदः ।

पृक्काप्लवस्थौणेयकाचीशैलेयरोचनातगरम् ।
ध्यामकं कुङ्कुमं मांसी सुरसाग्रैलालकुष्ठघ्नम् ॥
बृहतीशिरीषपुष्प-श्रीवेष्टकपद्मचारटीविशालाः ।
सुरदारुपद्मकेशर-शावरकमनःशिलाकौन्त्यः ॥
जात्यर्कपुष्पसर्षप-रजनीद्वयहिङ्गुपिप्पलीलाक्षाः ।
जलमुद्गपर्णीमधूकमदनकफलसिन्धुवाराश्च ॥
सम्पाकलोध्रमयूरकगन्धफलीनाकुलीविड़ङ्गाश्च ।
पूष्येणोद्धृत्य समं पिष्ट्वा गुड़िका विधेयाः स्युः ॥
जन्तुविषघ्नो जयकृद विषमृतसञ्जीवनो ज्वरनिहन्ता ।
घ्रेयविलेपनधारणधूमग्रहणैर्गृहस्थश्च ॥
भूतविजयस्वलक्ष्मीकार्म्मणमन्त्राग्न्यशन्यरीन् हन्यात् ।
दुःस्वप्नस्त्रीदोषानकालमरणाम्बुचौरभयं ॥
धनधान्यकार्य्यसिद्धि-श्रीपुष्ट्यायुर्विवर्द्धनो धन्यः ।
मृतसञ्जीवन एष प्रागमृतादब्रह्मणाभिहितः ॥

9. VṚHAT AGNIMUKHA CURṆA.

बृहदग्निमुखं चूर्णम् ।

द्वौ क्षारौ चित्रकं पाठा विडङ्गं लवणानि च ।
सूक्ष्मैला तगरं भार्गीं कारवी हिङ्गु पौष्करम् ॥

सठी दार्वी विडङ्गमुस्ता वचा चेन्द्रयवास्तथा ।
धात्रीजीरकवृक्षाम्लश्रेयस्यः सोपकुञ्चिकाः ॥
अम्लवेतसमम्लीका दाड़िमं सकटुत्रयम् ।
भल्लातकाजमोदं च यवानी सुरदारु च ॥
अभयाऽतिविषा चव्या हपुषारग्वधस्तथा ।
तिल्वमुष्ककशिग्रूणां कोकिलाक्षपलाशयोः ॥
क्षाराण्यमूनि तुल्यानि सूक्ष्मचूर्णानि कारयेत् ।
लोहकिट्टं च सप्ताहं तप्तं गोमूत्रसेचितम् ॥
विद्वान्सुभावितं कृत्वा योगेऽस्मिन्प्रक्षिपेत्ततः ।
मातुलुङ्गरसेनैव भावयेत्तु दिनत्रयम् ॥
दिनत्रयं तु शुक्तेन तथाऽऽर्द्रकरसेन च ।
सुभावितं ततः कृत्वा भक्तमध्ये प्रयोजयेत् ॥
एषोऽग्निकल्पचूर्णस्तु नाशयत्यचिराद्गदान् ।
अजीर्णकं तथाऽऽनाहं पञ्च गुल्मान् सुदुस्तरान् ॥
ग्रहणीपाण्डुरोगांश्च श्वासकासांश्च दारुणान् ।
अपस्मारं तथोन्मादं विभ्रमं च मदात्ययम् ॥
प्रणुदत्युल्बणानेतान्नष्टमग्निं च दीपयेत् ।
समस्तव्यञ्जनोपेतं भक्तं कृत्वा तु भोजने ॥
प्रदद्यादस्य चूर्णस्य विड़ालपदकं भिषक् ।
ततस्तद्द्रवतां याति कोष्णत्वं च प्रपद्यते ॥
एतदग्निमुखं चूर्णं चूर्णराजो निगद्यते ।
ब्रह्मणा निर्मितं ह्येतदश्विभ्यां परिकीर्तितम् ॥

10. Vṛhat Sārasvat Cūrṇa.

वृहत्सारस्वतं चूर्णम् ।

कुष्ठाश्वगन्धे लवणाजमोदे द्वे जीरके त्रीणि कटूनि पाठा ।
माङ्गल्यपुष्पी च समानि चूर्णं कृत्वा तु चूर्णेन वचोद्भवेन ॥
तुल्येन युक्तं बहुशो रसेन तद्भावितं ब्रह्मविनिर्मितायाः ।
सर्पिर्मधुभ्यां च ततोऽक्षमात्रं लिहन्नरः सप्तदिनं हिताशी ।

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सौख्यमिच्छन्मनसश्च धैर्य्यं मेधां तथेच्छन्द्विगुणं च कालम् ।
पठेन्नरः श्लोकसहस्रमज्ञा तद्वत्प्रयुक्तं त्रिगुणं च कालम् ॥
सारस्वतमिदं चूर्णं ब्रह्मणा निर्म्मितं स्वयम् ।
जगद्धितार्थं लोकानां दुर्मेधसां विचेतसाम् ॥

11. Candraprabhā Guṭikā.

चन्द्रप्रभा गुटिका ।

कीटघ्नेभकणाग्निमागधिजटामुस्ताशठीताप्यकं
भूनिम्बत्रिफलासुराह्वचविकाव्योषं वचा धान्यकम् ।
दार्वीयुग्मविषाविडङ्गलवणं क्षारत्रिजातान्वितं
कर्षं कर्षमतः पुराह्वयपलं शैलेयकाष्टान्वितम् ॥
लोहात्तत्र सिताचतुष्पलयुतं स्याद्वंशिकायाः पलं
हन्त्यर्शांसि षड़ेव गुल्ममजयं शोषं क्षयं कामलाम् ।
नाड़ीमर्मगदाश्मलोदररुजो दीर्घज्वरान्विद्रधीन्
यक्ष्माणं सभगन्दरं कफमरुत्पित्तोद्भवं पाण्डुताम् ॥
तं तं व्याधिसमूहशुक्रविकृतीन्ग्रन्थ्यर्बुदश्लीपदान्
मेहांश्चक्षुविनाशमश्मरिरुजस्त्वन्यांश्च देहस्थितान् ।
व्याधीन्हन्ति हठादनेन विधिना चन्द्रप्रभा सेविता
मन्दाग्नेः परमं प्रदीपनमियं कुर्याज्जरां जर्जराम् ॥
स्वेच्छाहारविधौ च पानविषये शीतातपे मैथुने ।
भुक्तं नास्ति विरोधितं च सततं प्रोक्ता पुरा ब्रह्मणा ॥

12. Sāyambhuva Guggula.

सायम्भुवो गुग्गुलुः ।

शशिरेखा पञ्चपलं तावद्गिरिजस्य गुग्गुलोर्दश च ।
ताप्यस्य पलत्रितयं द्वे लोहाभ्रवणिकायाश्च ॥
त्रिफलाकरञ्जपाठाखदिरगुड़ूचीवचाचित्रदन्ती- ।
मुस्ताविड़ङ्गरजनीचतुरङ्गुलवह्निकुटजैश्च ॥

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पलिकैश्चूर्णमितन्मूत्रेण गवां पिवेन्नरः प्रातः ।
कुष्ठी घृतमधुमिश्रं जयत्यसृग्वातमचिरेण ॥
श्वित्राणि कुष्ठकोठौ विषगरगुल्मोदरप्रमेहांश्च ।
उन्मादभगन्दरमपस्मृतिश्लीपदक्रमिश्वासान् ॥
जयति वलीपलितानि च योगः स्वायम्भुवः प्रोक्तः ॥

13. MĀCIKĀSAVA.

माचिकासवः ।

माचिकाख्याः शतार्धं तु द्रोणेऽपां च विपाचयेत् ।
चतुर्थशेषे तस्मिंस्तु पूते शीते प्रदापयेत् ॥
गुड़स्य द्विशतं दत्वा तत्सर्वं घृतभाजने ।
विड़ङ्गपिप्पलीकृष्णात्वगेलापत्रकेसरैः ॥
मरिचैश्च तथा चूर्णं सम्यक्कृत्वा विचक्षणः ।
क्षिपेच्च पालिकैर्भागैर्घटनीयं समन्ततः ॥
ततो यथाबलं पीत्वा कासश्वासगलामयान् ।
हन्ति यक्ष्माणमत्युग्रमुरःसन्धानकारकः ॥
माचिकासव इत्येष ब्रह्मणा निर्मितः पुरा ।

14. DASASĀRA SARPI.

दशसार स्वर्पिः ।

वाशागलूचीनिर्गुण्डी बृहतीद्वयभृङ्गराट् ।
कासमर्दोऽपि भूनिम्बावर्षाभूवचवल्लिका ॥
समूलपत्रं निष्पीड्य कुडवेन पृथक् पृथक् ।
घृतेनानेन तुल्येन समानानेव पाययेत् ॥
कासान् पञ्चविधान् * * * यानेकदसृक्स्रुतः ।
दशसारमिदं सर्पिः ब्रह्मणा निर्मितं पुरा ॥

15. KARṆĀMṚTA OIL.

कर्णामृतं तैलम् ।

रामठं निम्बपत्राणि फेनः सागरसम्भवः ।
एतानि समभागानि तद्द्वेयं सितं विषम् ॥
गोमूत्रेण समायुक्तम् कटुतैलं विपाचितम् ।
तेनैव पूरयेत्कर्णं नरकुञ्जरवाजिनाम् ॥
कर्णरोगं निहन्त्याशु लेपनाच्छिरसो गदान् ।
नाम्ना कर्णामृतं तैलं ब्रह्मणा निर्मितं स्वयम् ॥

16. SAHACARA OIL.

सहचर तैलम् ।

The authorship of this formula is also attributed to Bhela. For a description of the preparation, see the formulæ ascribed to Bhela.

Disciples of Brahmā: According to Suśruta,[1] Brahmā is said to have first instructed Prajāpati Dakṣa in the science of medicine. The Aśvin twins learned it from Dakṣa. They communicated the knowledge to Indra, who in his turn, promulgated the science to Dhanvantari. He appeared on the earth as Divodāsa Dhanvantari, King of Benares, and taught Suśruta and others the science and art of surgery as well as the other branches of the medical science.

Caraka,[2] however, on the authority of Agniveśa as instructed by Punarvvasu Ātreya, mentions Bharadvāja, as the disciple of Indra. He taught Punarvvasu and other sages. Punarvvasu Ātreya imparted his knowledge to his six students, Agniveśa, Bhela, Jatukarṇa, Parāśara, Hārīta and Kṣārapāṇi. Caraka redacted Agniveśa's work, and Dṛḍhavala supplied the last forty-four chapters and edited the entire compendium.

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[1] Suśruta Saṁhitā, I. i.

[2] Caraka Saṁhitā, I. i.

In the Brahma Vaivarta Purāṇa,[1] Brahmā is said to have given the Āyurveda to Bhāskara (the sun-god) who is represented as the fountain of all medical knowledge. Dhanvantari, Divodāsa, the Asvin-pair and others learned the science from Bhāskara, and composed original treatises on medicine.

Vāgbhaṭa II[2] is of opinion that the sons of Atri and other sages learned the science of medicine from Indra. Aruṇadatta[3] in his commentary mentions Ātreya, Dhanvantari, Nimi, Kāśyapa, as disciples of Indra. Ātreya's students were Agniveśa and his colleagues.

Bhāvamiśra[4] describes Indra as the preceptor of Ātreya, Bharadvāja and Dhanvantari. Ātreya was the teacher of Agniveśa and five other sages. Dhanvantari taught Suśruta and his companions. Caraka is described by him as an incarnation of Anantadeva, the serpent-god, who is said to have acted as the custodian of the Vedas and the Āyurveda when Nārāyaṇa rescued the Vedas in his Fish Incarnation.

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[1] See foot-note 3, p. 6.

[2] Aṣṭāṅga Hṛdaya Saṁhitā, I. i.

अत्रिपुत्र आत्रेय आदिर्येषां धन्वन्तरिनिमिकाश्यपादीनां त एवं ते चात्रेयादयोऽग्निवेशादि तानजिग्रहन् ।

Sarvāṅga Sundara, I. i.

[4] Bhāva Prakāśa, I. i.

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VIṢṆU

In the Ṛgveda, Viṣṇu is described as striding through the seven regions of the universe in three steps[1]—a legend which the Pauranic authors dilated upon and which culminated into the story of "Vāmana Avatāra" or the Dwarf Incarnation of Viṣṇu and Valī Rājā. Yāska[2] and his commentator Durgācāryya[3] identify him with the Sun-god. Max Müller adopts their views and remarks: "The stepping of Vishnu is emblematic of the rising, the culminating, and setting of the sun."[4] In the Mahābhārata and the Purāṇas, he is the second member of the Hindu triad and is known as "the Preserver."[5]

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[1] अतो देवा अवंतु नो यतो विष्णुर्विचक्रमे ।
पृथिव्याः सप्त धामभिः ॥१६॥
इदं विष्णुर्वि चक्रमे त्रेधा नि दधे पदं ।
समूळ्हमस्य पांसुरे ॥१७॥
त्रीणि पदा वि चक्रमे विष्णुर्गोपा अदाभ्यः ।
अतो धर्माणि धारयन् ॥१८॥

Ṛgveda, I. xxii.

[2] यदिदं किञ्च तद्विक्रमते विष्णुः । त्रिधा निधत्ते पदं । त्रेधा भावाय पृथिव्यां अन्तरिक्षे दिवि इति शाकपूणिः । समारोहणे विष्णुपदे गयशिरसि इति और्णवाभः ।

Nirukta, 12. 19.

[3] विष्णुरादित्यः । कथमिति यत आह त्रेधा निदधेपदं निधत्ते पदं निधानं पदैः । क्व तत् तावत् । पृथिव्यां अन्तरिक्षे दिवि इति शाकपूणिः । पार्थिवोऽग्निर्भूत्वा पृथिव्यां यत्किञ्चिदस्ति तद्विक्रमते तदधितिष्ठति । अन्तरिक्षे वैद्युतात्मना । दिवि सूर्य्यात्मना यदुक्तं तमू अकृण्वन त्रेधा भुवे कमिति । समारोहणे उदयगिरौ उद्यन् पदमेकं निधत्ते । विष्णुपदे मध्यन्दिनेऽन्तरिक्षे । गयशिरस्यस्तं गिरौ इति और्णवाभ आचार्य्यो मन्यते ।

Durgācāryya.

[4] Translation of the Rigveda, Vol. I, p. 117. (1869)

[5] सृष्टिस्थित्यन्तकरणात् ब्रह्माविष्णुशिवात्मिका ।
स संज्ञां याति भगवान् एक एव जनार्द्दनः ॥

He is a popular deity, and his worshippers recognise in him the Supreme Being. His wife is Lakṣmī, the goddess of fortune; his heaven is Vaikuṇṭha, and his vehicle is the fabulous bird Garuḍa. He has thousand names of which Nārāyaṇa (*lit.*—moving in water) is the most common. It is said that all kinds of fever are cured when prayer is offered to him by the recital of his thousand names.[1]

He is referred to in the Bower MS., as the deviser of the Siddhārtha (or efficacious) oil.[2] The formula occurs both in the Vaṅgasena and the Cakradatta under the name of Nārāyaṇa. In the Tattva Candrikā, Sivadāsa explains the name as derived either from its author, Viṣṇu or Nārāyaṇa, or from the principal drug 'Satāvarī' which has a synonym Nārāyaṇi.[3] The formula has however a distinct name Siddhārtha, and it is elsewhere ascribed to Viṣṇu.

Formulæ ascribed to Viṣṇu :—

Names.	Authors.	Books.
1. Nārāyaṇa Taila Siddhārtha Taila	Nārāyaṇa	C. D., xxii. p. 135. Śataślokī, p. 48. Sāraṅgadhara, p. 161. Bower MS., p. 188.
2. Satāvarī Taila	Viṣṇu	G. N., Vol. I, p. 38.

ब्रह्मत्वे सृजते चैव विष्णुत्वे पाति नित्यशः ।
रुद्रत्वे चैव संहर्त्ता एको देवस्त्रिधा स्थितः ॥
Agni Purāṇa, Svargānuśāsana Chapter.

[1] विष्णुं सहस्रमूर्द्धानं चराचरपतिं विभुम् ।
स्तुवन् नामसहस्रेण ज्वरान् सर्व्वान् व्यपोहति ॥
Cakradatta, 1. v. 183.
Gada Nigraha.

[2] Bower MS., p. 188.

[3] नारायण संज्ञा चास्य विष्णुनिर्म्मितत्वात्, शतावरी रस साधितात्वाद्वा ।
Tattva Candrikā, Vātavyādhi Cikitsā.

	Names.	Authors.	Books.
3.	Svalpa Nārāyaṇa Taila	Viṣṇu	V. S. XXIV. vv. 2 3-292, p. 373.
	,, Viṣṇu Taila	,,	Bhaiṣajyaratnāvalī. V. S. XXIV. vv. 2 8-275, p. 371.
4	Madhyama Nārāyṇa Taila	,,	V. S. XXIV. vv. 2 3-302, p. 374. C. D., XXII. 66, p. 135.
5.	Mahā ,, ,,	,,	V. S. XXIV. vv. 3 3-315., p. 375. C. D., XXII. 67, p. 135. V. K. V., p. 213.
	Vṛhat Viṣṇu Taila	,,	Bhaiṣajyaratnāvalī.
6.	Viṣṇu Taila	,,	V. S. XXIV. vv. 2 8-275, p. 371. C. D., XXII. v. 78 p. 134.
7.	Vṛhat Śṛṅgāra Abhra	,,	R. S. S., pp. 290, 84.
8.	Nityodaya Rasa	,,	,, p. 291.
9.	Āmavātesvara	,,	,, p. 342.
10.	Sarvāṅga Sundara Rasa	,,	,, p. 351.

1. Nārāyaṇa Taila.

नारायणतैलम् ।

विल्वाग्निमन्थ: श्योणाक: पाटल: पारिभद्रक: ।
प्रसारण्यश्वगन्धा च बृहती कण्टकारिका ॥
वला चातिवला चैव श्वदंष्ट्रा सपुनर्नवा ।
एषां दशपलान् भागांश्चतुर्द्रोणेऽम्भस: पचेत् ॥
पादशेषं परिस्राव्य तैलपात्रं प्रदापयेत् ।
शतपुष्पा देवदारु मांसी शैलेयकं वचा ॥
चन्दनं तगरं कुष्ठमेला पर्णीचतुष्टयम् ।
रास्ना तुरगगन्धा च सैन्धवं सपुनर्नवम् ॥
एषां द्विपलिकान् भागान् पेषयित्वा विनिक्षिपेत् ।
शतावरीरसश्चैव तैलतुल्यं प्रदापयेत् ॥

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आजं वा यदि वा गव्यं क्षीरं दत्त्वा चतुर्गुणम् ।
पाने वस्तौ तथाभ्यङ्गे भोज्ये चैव प्रशस्यते ॥
अश्वो वा वातसंभग्नो गजो वा यदि वा नरः ।
पङ्गुलः पीठसर्पी च तैलेनानेन सिध्यति ॥
अधोभागे च ये वाताः शिरोमध्यगताश्च ये ।
दन्तशूले हनुस्तम्भे मन्यास्तम्भे गलग्रहे ॥
यस्य शुष्यति चैकाङ्गं गतिर्यस्य च विह्वला ।
क्षीणेन्द्रिया नष्टशुक्रा ज्वरक्षीणाश्च ये नराः ॥
वधिरा लल्लजिह्वाश्च मन्दमेधस एव च ।
अल्पप्रजा च या नारी या च गर्भं न विन्दति ॥
वातार्त्तौ वृषणौ येषामन्त्रवृद्धिश्च दारुणा ।
एतत् तैलवरं तेषां नाम्ना नारायणं स्मृतम् ॥

तगरं नतमत्र स्यादभावे शिवलिङ्गीपड़ः ॥

2. Satāvarī Taila.

शतावरीतैलम् ।

शतावरीरसप्रस्थं क्षीरप्रस्थं तथैव च ॥
शतपुष्पा देवदारु मांसी शैलेयकं बला ।
चन्दनं तगरं कुष्ठमेला सांशुमती तथा ॥
एतैः कर्षसमैर्भागैस्तैलप्रस्थं विपाचयेत् ।
कुब्जवामनपङ्गूनां बधिरव्यङ्गकुष्ठिनाम् ॥
वायुना भग्नदेहानां येऽवसीदन्ति मैथुने ।
जराजर्जरदेहानां वश्मातिसुखशोषिणाम् ॥
त्वग्गताश्चापि ये वाताः सिरास्नायुगताश्च ये ।
सर्वांस्तान्नाशयत्याशु तैलं नास्त्यत्र संशयः ॥
नारायणमिदं नाम्ना विष्णुना समुदाहृतम् ।

दशाङ्गमिति विख्यातं न क्वचित्प्रतिहन्यते ॥

3. SVALPA VIṢṆU TAILA.

स्वल्पविष्णुतैलम् ।

शालपर्णीपृश्निपर्णीबलागोरक्षतण्डुला: ।
एरण्डस्य च मूलानि बृहत्यो: पूतिकस्य च ॥
शतावरी सहचरं पचेद्दतै: पलोन्मितै: ।
तैलं प्रस्थं पयो दत्वा गव्यं वाजं चतुर्गुणं ॥
अस्य तैलस्य पक्वस्य शृणु वीर्य्यमत: परं ।
वातार्त्ता नरनागाश्च पीत्वा दृढतनुत्वच: ॥
हृत्पार्श्वशूले वातार्त्ते गलगण्डेऽर्द्दिते क्षये ।
शर्कराश्मरिपाण्डुत्वकामलाङ्गविभेदके ॥
क्षीणेन्द्रियेऽन्त्रवृद्धौ च जराजर्ज्जरिते हितं ।
स्त्रीणामश्वतरीणाञ्च गर्भस्थितिकरं परं ॥
एतदङ्गवरं तैलं विष्णुना परिकीर्त्तितम् ।

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4. MADHYAMA NĀRĀYAṆA TAILA.

मध्यमनारायणतैलम् ।

This is the popular name of Nārāyaṇa Taila. An English translation of the formula is given in Dutt's Materia Medica of the Hindus, p. 261.

5. MAHĀ NĀRĀYAṆA TAILA.

महानारायणतैलम् ।

शतावरी चांशुमती पृश्निपर्णी शटी बला ।
एरण्डस्य च मूलानि बृहत्यो: पूतिकस्य च ॥
गवेधुकस्य मूलानि तथा सहचरस्य च ।
एषां दशपलान् भागान् जलद्रोणे विपाचयेत् ॥
पादावशेषे पूते च गर्भं चैनं समावपेत् ।
पुनर्नवा वचा दारु शताह्वा चन्दनागुरु ॥

शैलेयं तगरं कुष्ठमेला मांसी स्थिरा बला ।
अश्वाह्वा सैन्धवं रास्ना पलार्द्धानि च पेषयेत् ॥
गव्याजपयसोः प्रस्थौ द्वौ द्वावव प्रदापयेत् ।
शतावरीरसप्रस्थं तैलप्रस्थं विपाचयेत् ॥
अस्य तैलस्य सिद्धस्य शृणु वीर्य्यमतः परम् ।
अश्वानां वातभग्नानां कुञ्जराणां नृणां तथा ।
तैलमेतत् प्रदातव्यं सर्व्ववातनिवारणम् ॥
आयुष्मांश्च नरः पीत्वा निश्चयेन दृढ़ो भवेत् ।
गर्भमश्वतरी विन्द्यात् किं पुनर्मानुषी तथा ॥
हृच्छूलं पार्श्वशूलञ्च तथैवार्द्धावभेदकम् ।
अपचीं गण्डमालाञ्च वातरक्तं हनुग्रहम् ।
कामलां पाण्डुरोगञ्च अश्मरीञ्चापि नाशयेत् ॥
तैलमेतद्भगवता विष्णुना परिकीर्त्तितम् ।
नारायणमिति ख्यातं वातान्तकरणं परम् ॥

VṚHAT VIṢṆU TAILA.

बृहद्विष्णुतैलम् ।

जलधरमश्वगन्धाजीवकर्षभकौ शटी ।
काकोली क्षीरकाकोली जीवन्ती मधुयष्टिका ॥
मधूरिका देवदारु पद्मकाष्ठञ्च सैन्धवं ।
मांसी चैला त्वचं कुष्ठं रक्तचन्दनशैलजं ॥
मञ्जिष्ठा मृगनाभिश्च श्वेतचन्दनकुङ्कुमं ।
पर्णी कुन्दुरु खोटिश्च ग्रन्थिकञ्च नखी तथा ॥
एतेषां पालिकैर्भागैस्तैलञ्चापि तथाढ़कं ।
शतावरीरससमं दुग्धञ्चापि समं भवेत् ॥
विष्णुतैलवरं श्रेष्ठं सर्व्ववातविकारनुत् ॥
ऊर्द्धवाते त्वधोवाते अङ्गविग्रह एव च ॥
शिरोमध्यगता ये च मन्यास्तम्भे गलग्रहे ।
यस्य शुष्यति चैकाङ्गं गतिर्यस्य च विह्वला ॥

ये वातप्रभवारोगा ये च पित्तसमुद्भवाः ।
सर्व्वांस्तान्नाशयत्याशु सूर्य्यस्तम इवोदितः ॥

6. VIṢṆU TAILA.

विष्णुतैलम् ।

शालपर्णी पृश्निपर्णी बला च बहुपुत्रिका ।
एरण्डस्य च मूलानि वृहत्योः पूतिकस्य च ॥
गवेधुकस्य मूलानि तथा सहचरस्य च ।
एषान्तु पलिकैः कल्कैस्तैलप्रस्थं विपाचयेत् ॥
आजं वा यदि वा गव्यं क्षीरं दद्याच्चतुर्गुणम् ।
अस्य तैलस्य पक्वस्य शृणु वीर्य्यमतः परम् ॥
अश्वानां वातभग्नानां कुञ्जराणां तथा नृणाम् ।
तैलमेतत् प्रयोक्तव्यं सर्व्वव्याधिनिवारणम् ॥
आयुष्मांश्च नरः पीत्वा निश्चयेन दृढो भवेत् ।
गर्भमश्वतरी विन्द्यात् किं पुनर्मानुषी तथा ॥
हृच्छूलं पार्श्वशूलञ्च तथैवार्द्धावभेदकम् ।
कामला-पाण्डुरोगघ्नं शर्कराश्मरीनाशनम् ॥
क्षीणेन्द्रिया नष्टशुक्रा जरया जर्ज्जरीकृताः ।
येषाञ्चैव क्षयो व्याधिरन्त्रवृद्धिश्च दारुणा ॥
अर्द्दितं गलगण्डञ्च वातशोणितमेव च ।
स्त्रियो या न प्रसूयन्ते तासाञ्चैव प्रयोजयेत् ॥
एतदङ्ग वरं तैलं विष्णुना परिकीर्त्तितम् ॥

7. VṚHAT ŚṚṄGĀRA ABHRA.

वृहच्छृङ्गाराभ्रम् ।

पारदं गन्धकञ्चैव टङ्कणं नागकेशरं ।
कर्पूरं जातिकोषञ्च लवङ्गं तेजपत्रकं ॥
एतेषां कर्षभागानि सुवर्णं तत्समं भवेत् ।
शुद्धं कृष्णाभ्रचूर्णञ्च चतुष्कपिचुभागिकं ॥

तालीशं घनकुष्ठञ्च मांसी पुष्पवराङ्गकं ।
एलावीजं त्रिकटुकं त्रिफला करिपिप्पली ।
एषां कर्षद्वयञ्चैव पिप्पलीक्वाथभावितं ।
अनुपानं प्रयोक्तव्यं चोचं क्षौद्रसमायुतं ।
नानारोग प्रशमनं विशेषात् कासरोगनुत् ।
वातिकं पैत्तिकञ्चैव श्लैष्मिकं सान्निपातिकं ।
हृच्छूलं पार्श्वशूलञ्च शिरःशूलं विशेषतः ।
स्वरामयं क्षयं कुष्ठं श्लेष्माणं वातशोणितं ।
वृहच्छृङ्गाराभ्रनाम विष्णुना परिकीर्त्तितं ।

रक्तपित्तञ्च कासञ्च नाशयेन्नात्रसंशयः ॥

8. NITYODAYA RASA.

नित्योदयरसः ।

सुशुद्धं पारदं गन्धं प्रत्येकं शुक्तिसम्मितं ।
ततः कज्जलिकां कृत्वा मर्द्दयेच्च पृथक् पृथक् ॥
विल्वाग्निमन्थश्योनाकं काश्मरीपाटला वला ।
मुस्तं पुनर्नवा धात्री वृहती वृषपत्रकं ।
विदारी वहुपुत्री च एषां कषैरसैर्भिषक् ।
सुवर्णं रजतं ताम्रं प्रत्येकं शाणमात्रकं ।
पलमात्रन्तु कृष्णाभ्रं तदर्द्धन्तु शिलाह्वकं ।
जातीकोषफले मांसी तालीशैला लवङ्गकं ।
प्रत्येकं कोलमात्रन्तु वासानीरैर्व्विमर्द्दयेत् ।
शोषयित्वातपे पश्चात् विदार्य्याः पेषयेद्रसैः ।
द्विगुञ्जां वटिकां कृत्वा पिप्पलीमधुना भजेत् ।
नाम्ना नित्योदयश्चायं रसो विष्णुविनिर्म्मितः ।

पञ्चकासान् निहन्त्याशु चिरकालोद्भवानपि ।
राजयक्ष्माणमुग्रं जीर्णज्वरमरोचकं ।
धातुस्थं विषमाख्यञ्च तृतीयकचतुर्थकं ।

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अर्शांसि कामलां पाण्डुमग्निमान्द्यं प्रमेहकं ।
सेवनादस्य कन्दर्परूपोभवति मानवः ॥

9. ĀMAVĀTEŚVARA RASA.

आमवातेश्वरोरसः ।

शुद्धगन्धं पलार्द्धञ्च मृतताम्रञ्च तत्समं ।
ताम्रार्द्धं पारदं शुद्धं रसतुल्यं मृतायसं ।
सर्व्वं पञ्चाङ्गुलेनैव भावयेच्च पुनः पुनः ।
संचूर्ण्य पञ्चकोलोत्थैः काथैः सर्व्वं विभावयेत् ।
रौद्रे विंशतिवारांश्च गुडूचीनां रसैर्द्दश ।
भृष्टटङ्कणचूर्णेन तुल्येन सह मेलयेत् ।
टङ्कणार्द्धं विड़ं देयं मारिचं विड़तुल्यकं ।
तिन्तिड़ीचारतुल्यञ्च सूततुल्यञ्च दन्तिकं ।
त्रिकटुत्रिफलञ्चैव लवङ्गञ्चार्द्धभागिकं ।
आमवातेश्वरो नाम विष्णुना परिकीर्त्तितः ।

महाग्निकारकोह्येष आमवातान्तको मतः ।
स्थूलानां कर्षणः श्रेष्ठः कृशानां स्थौल्यकारकः ।
अनुपानविशेषेण सर्व्वरोगविनाशनः ।
अनेन सदृशो नास्ति वह्निदीप्तिकरो महान् ।
गुल्मार्शो-ग्रहणीदोष-शोथ-पाण्डुरुजापहः ॥

10. SARVĀṄGA SUNDARA RASA.

सर्व्वाङ्गसुन्दरोरसः ।

शुद्धसूतं तथा ताम्रं शिलामाक्षिकतालकं ।
रजतं स्वर्णवङ्गञ्च लौहमभ्रं सनागरं ।
चूर्णयेत् पञ्चलवणं देयं सर्व्वन्तु तुल्यकं ।
गन्धकं मिश्रयेत् सर्व्वं रसैरेषां विभावयेत् ।
शुण्ठी-जयन्ती-विजया-महाराष्ट्रीक-धुस्तजैः ।

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सर्व्वाङ्गसुन्दरोनाम्ना रसोयं विष्णुनिर्म्मितः ।

खादेदेरण्डशुण्ठीभ्यां माषमात्रं दिने दिने ॥
कफवातामयं हन्ति चानुपानं वदाम्यहं ।
व्योषं सौवर्च्चलं हिङ्गु करञ्जबीजसंयुतं ।
पिबेदुष्णाम्बुना चानु सर्व्वशूलनिकृन्तनं ॥

Reference :

1. In the Bower MS.,[1] Keśava or Viṣṇu is said to have asked Dhanvantari : Is theire any medicine at all capable of curing all diseases ? In response to this query, Dhanvantari declared the Doctrine of the Plumbago-Plant.

2. The god Viṣṇu is recommended to be meditated when medicine is administered to a patient.[2] This practice is still in vogue among the orthodox Hindus.

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[1] Bower MS., p. 169.

[2] औषधे चिन्तयेद्विष्णुं ।

ŚIVA

In the Purāṇas, Śiva is considered to be the first propounder of the Science of Medicine. In later treatises, he is often quoted as an authority on medical subjects, and there exist, in these books, many formulæ which are said to have been prescribed by the god. A comprehensive work on medicine called Āyurgranṭha or the Book of Life is ascribed to him, and he is said to have composed the work in the Tretā Yuga.

The name of Śiva, however, does not occur in the Ṛgveda, but Rudra is mentioned by name there in connection with medical topics. Tryamvaka is mentioned there once. In the Yajurveda, prayers are offered to Rudra and Tryamvaka, and in this Veda, we find the different names of Rudra cited, amongst which Śiva occurs. He is specially called on to avert diseases and pestilences. He is prayed as the kindly god who cures disease, and from him Manu got wealth and health. From such a prototype comes the healing god Śiva in later literature.

We find Rudra invoked as the bestower of wealth and long life in the hymn by Gṛtsameda :

"Nursed by the sanitary vegetables which are bestowed by thee, may I live a hundred years : extirpate my enemies, my exceeding sin, and my manifold infirmities."

* * * * * *

"Let us not provoke thee, Rudra, to wrath by our (imperfect) adorations......invigorate our sons by the medicinal plants, for I hear that thou art a chief physician."

And in subsequent verses Rudra is again solicited to give the gift of healing herbs and those medicaments which "are the alleviative (of disease) and defence against danger." [1]

Now who is Rudra? In the Ṛgveda, we find that sometimes Agni and Indra are called Rudra. In Ṛgveda, i. 27, 10, (Sv., i. 15, and Nir., x. 7 and 8) we find: जरावोध तद * * * * स्तोमं रुद्राय दृशीकं । Yāska comments: Agni is also called Rudra.[2] Sāyaṇa also agrees with Yāska.[3]

His sisters were the Ambikās (Vaj. S. 3. 57, Yv. iii. 57). In the Purāṇas, Ambikā is described as the wife of Śiva. Roth (Illus. of Nir., p. 136) refers to Rv. v. 70, 2, and Rv. viii. 26, 5, where the epithet Rudra is applied in the dual to Mitra and Varuṇa and to the Aśvins respectively. Thus we find that the Aśvins, Agni, Mitra and Varuṇa are called Rudras. He is said to be the father of the Maruts.[4] Pṛśni was their mother. (See Sāyaṇa's Commentary on Rv. i. 39, 4; i. 114, 6; Rv. v. 52, 16; 60, 5; vi. 66, 3.) Agni is called Rudra in Rv. ii. 1, 6, Thou art Asura Rudra, etc.[5] (See also Rv iii. 2, 5; v. 3, 3; iv., 3, 1, but in .v 6. Rudra is referred to as the name of another god; Commentary on Rv. vi. 16, 39; viii. 61, 3; S. B. i. 7, 3, 8 रुद्रोऽग्निरिति; 6, 1, 3, 7 ff.

We find in the Yajurveda that the various names of Rudra are described :—

Kṛibi (x. 20k.), Bhava, Rudra, Śarvva, Paśupati, Nīlakaṇṭha, Sitikaṇṭha (xvi. 28), Kaparddī, Vyuptakeśa,

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[1] Mrs. Manning. Ancient and Mediæval India, Vol. I, p. 337.

[2] अग्निरपि रुद्र उच्यते । Yāska.

[3] त्वम् अग्ने रुद्रो असुरो etc. Sāyaṇa.

[4] रुद्रासः रुद्रपुत्रा मरुतः । Sāyaṇa.

[5] रुद्राय क्रूराय अग्नये । Sāyaṇa.

Sahasrākṣa, Śatadhanvā, Girisaya, Sipibiṣṭa, Mīḍhusṭama, Iṣumān (xvi. 29), Śaṅkara, Śiva, Śivatara (xvi. 41). Besides these, the other names of Rudra are mentioned.

Max Müller[1] identifies Bhava with the Greek sun-god Phœbus, according to phonetic laws. Weber[2] thinks the original meaning of Rudra to be thunder (Root. *Ruda* to shout).

His works :

1. Āyurgrantha : The Book of Life. Śiva is said to have written this work in the Tretā Yugā, as the first medical work, the original source of the medical science.

2. Rudryāmala Tantra : Śiva is said to have composed a comprehensive book called Rudryāmala Tantra in which he propounded the use of mercury as a therapeutic agent. Many books are extant which profess to be parts of this original treatise : *viz.*,

(*i*) Pārada kalpa : It forms a chapter of Rudryāmala Tantra and describes the preparations and medicinal uses of mercury.

(*ii*) Dhātukalpa : It forms a chapter of Rudryāmala Tantra and treats of the therapeutic uses of metallic substances.

(*iii*) Haritālakalpa : It forms a chapter of Rudryāmala Tantra and it describes the properties and medicinal uses of yellow orpiment.

(*iv*) Abhrakalpa : a treatise on the properties and medicinal uses of mica.

(*v*) Haritakīkalpa : It treats of the uses of myrobolan.

(*vi*) Dhātukriyā or operations with metals : It is in the shape of a dialogue between Śiva and Pārvatī. "The work cannot be placed earlier than in the sixteenth century A.D., as it contains reference to the country of the *Phirangas* and to Rúma, the Arabic name of Constantinople." [1] The book is also called Dhātumañjarī.

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[1] Max Müller : Origin and Growth of Religion (1882), p. 216.

[2] Weber : Indische Studien, translated in Muir's Sanskrit Texts, Vol. IV.

3. Kāma Tantra: a treatise on the sexual science. A compilation from this book is called "Mantratantrauṣadhi" which treats of the use of medicines prepared with the help of charms and incantations.

4. Śaiva Siddhānta: The work is mentioned and quoted by Cakrapaṇidatta with reference to Śiva Guṭikā.[2]

5. Āyurveda:

MS: GOML. (Madras), Vol. xxiii, No. 13086.

A treatise dealing with the symptoms, the diagnosis and the treatment of diseases. "The Science of Āyurveda is here stated to be an appendage of the Ṛgveda and to have been revealed by God Parama-śiva to Goddess Pārvatī."

Beginning: कैलास शिखरे रम्ये पार्व्वती परमेश्वरी ।
अन्योन्यसुखलीलायां प्रमथादिमहागणे ॥

* * * *

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सर्व्वभूतहितं गोप्यं ऋग्वेदाङ्गं (वे)दरूपकम् ।
आयुर्व्वेदमिदं नाम सर्वजन्तु(न्तो)ष जीवनम् ॥

End: चयप्रकोपप्रशमा वायोर्ग्रीष्मादिषु त्रिषु ।
वर्षादिषु च पित्तस्य श्लेष्मणः शिशिरादिषु ॥
अग्रे पैत्यगतिर्नाड़ी मध्ये मारुत जायते ।
अन्त्ये श्लेष्म च विज्ञेयं कोविदैः शास्त्रपारगैः ।

Colophon: इति व्याधिरूपं समाप्तम् ॥

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[1] Ray, History of Hindu Chemistry, Vol. II, Ch. 1, p. lxxx.

[2] शैवसिद्धान्तोक्ती शिवागुड़िकेयम् ।
Çakradatta, Rasāyanādhikara, p. 366.

Ibid : MS. No. 13087. "Similar to the above. It is written in prose in the form of sūtras. The work appears to be the same as that described on p. 63 of Dr. Burnell's Catalogue."

MS. No. 1308. Similar to the above.

6. Kailāsakāraka : MS : GOML., Vol. xxiii, No. 13113.

"On the purification of mercury and on the method of using it in medicinal preparations. In the beginning the legendary account of the origin of mercury is given. The work is in the form of a conversation between Śiva and Pārvatī."

Beginning : रसाकाराय शर्वाय नमस्सर्वार्थकारिणे ।
जरामरणदारिद्र्यव्याधिदुःखापहारिणे ॥
कैलासशिखरासीनं कान(म)कन्दर्पनाशनम् ।
प्रसन्नं परमेशानं जगदानन्दकारणम् ॥

End : पञ्चैव कषायेन पूर्वपूर्वबलप्रदाः

* * * *

चालब्धा दधिकाली च योज्यं तद्दर्शिकल्पनात् ॥

Colophon : इति कैलासकारकः समाप्तः ॥

7. Vāidyarāja Tantra : MS : GOML., Vol. xxiii, No. 13226.

"This work is apparently a comprehensive medical treatise. The portion contained in this MS. gives details for feeling the pulse and is stated to have been revealed by Parama-śiva to Pārvatī."

Beginning : कैलासशिखरे रम्ये नानारत्नविभूषिते ।
नानाकल्पद्रुमाकीर्णे गुल्फसम्बाधवर्जिते ॥

End : पूर्वं पीथ (पित्त) गति प्रभञ्जनगतिश्श्ले ष्मानसाभिप्र(विप्र)ती—
अत्यन्तभ्रमणीं मुहुर्विदधतीं चक्राधिरूढाजि(व)वा ।

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सौक्ष्मत्वं दधतीं कलापरहितं सर्वं गतिं चाश्रुतां
नो साध्यं धमनीं वदन्ति सुधियो नाड़ीगतिं ज्ञानिनः ॥

Colophon : इति श्रीपार्वतीसंवादे वैद्यराजतन्त्रे नाड़ीज्ञानं प्रथमकारणं सम्पूर्णम् ॥

References to Rudra as a physician in the Vedas :—

Rv. i. 43. 2	Rudra's medicines.
4	Rudra, the possessor of healing remedies. Prayer for health and wealth.
114, 1 (Vaj. S. 16,48 ; Taitt. S. iv. 5,10,1)	Prayer to Rudra for men and beasts to be prosperous and free from disease.
2	Prayer to obtain what health and wealth father Manu acquired.
5	Rudra carries in his hands the best remedies.
7	Prayer not to kill the old men, boys, fathers, mothers, adults, fœtus, and our bodies.
8	Prayer not to kill our sons, grandsons and men, cows and horses.
ii. 33. 1	May we increaee in offspring, O Rudra.
2	Prayer for 100 years of life by Rudra's blissful medicines. Put away far from us sickness in all directions.

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4 : Raise up our men by thy medicines, for I hear thou art the greatest physician of physicians.

7 : O Rudra, where is thy softly stroking hand which cures and relieves?

6 : Prayer to gain the favour of Rudra who has gladdened the suppliant with more vigorous health.

12 : Thou wilt give us thy medicines.

13 : The pure medicines of Maruts, those medicines which Manu, our father, chose, those I crave from Rudra, as health and wealth.

v. 42, 11 : Rudra commands all remedies.

vi. 74, 2 : Prayer to Soma and Rudra to
drive away diseases in every
4 direction ; and to infuse the
remedies into our bodies.

vii. 46. (Nir. x. 6),

2 : Prayer to Rudra to come without illness among our offspring.

3 : He has thousand remedies.

59 : Tryamvaka is mentioned.

Yv. iii. Kaṇḍikās 57 : Tryamvaka is mentioned. Ambikā is Rudra's sister.

„ 58 : Rudra is called Tryamvaka.

„ 59 : O Rudra, you are the best medicines: Prayer for Rudra's

		medicines for men and animals.
Yv.	iii. Kaṇḍikās 60 :	Prayer to Tryambaka to be free from birth and death.
	„ 61 : „ 1-16	Śiva by name is mentioned. O Rudra! live within our body and protect it.
	xvi. Śatarūdrīya (Rv. i., 114,1 ff) (Taitt. S. iv. 5,)	Prayer to Giriśa for good health (4) and for a first class physician, well-versed in the Vedas (5). He is prayed for not to kill fœtus, boys and adults (15) and also for long life (16).
	„ 47—49 :	Prayer to Śiva for recovery from diseases.
Av. :	xi. 2, 22 :	Reverence to him whose consumption, whose cough, assail one like the neighing of a stallion.
	26 :	Do not assail us with consumption or poison.

References to Rudra in the Ṛgveda—

Rv.	i, 27, 10 (Sv. i, 15; Nir. x. 8) :	Rudra identified with Agni.
	39 :	Maruts, the sons of Rudra.
	43 :	See page 33.
	64, 2 3 :	Maruts, the manly youths of Rudra.
	85, 1 :	Maruts, the powerful sons of Rudra,

114, 1
(Vaj. S. 16, 48;
Tatt. S. iv, 5, 10,
1.) : Kaparddī is mentioned. Also see page 33.
122, 1. : Asura Rudra.
129, 3. : The renowned Rudra.
ii, 1, 6 : Agni, thou art Rudra, the Asura of the sky.
33, 1—15 : Hymn by Gṛtsameda.
34, 2 : Rudra, the strong man.
38, 9 : Rudra is mentioned.
iii, 2, 5 : Agni is called Rudra.
iv, 3, 1 : Golden Rudra Agni.
6 : Rudra, the destroyer of man.
v. 3, 3 : Prayer to Agni who is invoked as Rudra.
41, 2 : Rudra is mentioned.
42, 11 : Rudra, the lord of all medicines.
15 : Maruts, the young sons of Rudra.
46, 2, (V. S.
33, 48) : Rudra is mentioned.
51, 13 : Prayer to Rudra to save us.
52, 16 : Pṛsni, the mother, and Rudra the father of the Maruts.
59, 8 : Rudra's son.
60, 5 : Rudra and Pṛsni the parents of Maruts.
70, 2 : Mitra and Varuṇa invoked as Rudras.
vi, 28, 7
(Av. iv, 21. 7) : Rudra's weapon.
49, 10 : Rudra, the lord of the world.

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50, 4 : Rudra's sons.
66, 3 : Sons of the bounteous Rudra.
11 : Strong and Marut-like son of Rudra.
74, 2 : O Soma and Rudra, draw far away in every direction the disease which has entered our house.
3 : O Soma and Rudra, bestow all these remedies on our bodies.
vii, 10, 4 : Great Rudra.
35, 6 : May Rudra god be peaceful to us.
36, 5 : Rudra is bestowing rice.
40, 5 : Rudra bestows glory.
41, 1, (V.S. 34, 34 ; Av. 3, 16, 1) We pray Soma and Rudra in the morning.
46, 2 : Be without illness among our people, O Rudra.
3 : A thousand medicines are thine.
56, 1 : Boys of Rudra.
22 (V. S. 1, 433) : Sons of Rudra.
58, 5 : Sons of Rudra.
59, 12 : Prayer to Tryambaka to be detached from death, like a gourd from its stem.
viii, 13, 20 : Maruts, the sons of Rudra.
20, 3 : Sons of Rudra.
17 : Rudra's sons, the lords of Asuras.
22, 14 : The Aśvin twins are invoked as two Rudras.

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26, 5 : O Asvins ! you are Rudra.
29, 5 : Rudra, the pure, the terrible, the pleasant, and the possessor of medicines, carries sharp weapons.
x, 64, 8 : Rudra and the Great Rudra among the Rudras.
65, 1 : Rudra is mentioned.
66, 3 : May Rudra with his sons make us happy.
93, 4 : When Rudra is prayed, men become happy.
7 : Vāyus, sons of Rudra.
125, 6 (Av. 4, 30, 5) : Rudra kills his enemies.
169, 1 : Prayer to Rudra to protect the cows.

In the Ṛgveda, medicines are described to be generally brought by Rudra, and by his sons, the Maruts. The following hymns refer to Maruts in connection with medicine :

Rv. ii. 33, 13 : O Maruts, those pure medicines of yours.
v. 53, 14 : You shower down health, wealth, water and medicine, O Maruts !
viii. 20, 23 : O bounteous Maruts, bring us some of your Marut-medicines.
25 : Whatever medicine there is on the Sindhu, on the Asikni, in the seas, on the mountains ;

26 : Seeing it, you carry all on your bodies. Bless us with it! Down to the earth, O Maruts, what hurts our sick one,—straighten what is crooked.

x. 77, 7 : The man who offers gifts to the Maruts, gains health and wealth, blessed with offspring.

The formulæ ascribed to Śiva :—

Formulæ.	Authors.	Books.	Page.
1. Cintāmaṇi Rasa	Bhairava	R. S. S.	125
2. Sūcīkābharaṇa Rasa	Bhairava	,,	137
3. Mṛtasañjīvana Rasa	Śaṅkara	,,	139
4. Ardhanārīśvara Rasa	Śambhu	,,	151
5. Sarvatobhadra Rasa	Śiva	,,	168
6. Cūḍāmaṇi Rasa	,,	,,	171
7. Vṛhat Cūḍāmaṇi Rasa	,,	,,	172
8. Grahaṇīśārddūla Rasa	,,	,,	194
9. Vaidyanātha Vaṭī	Vaidyanātha	,,	195
10. Rājavallabha Rasa	Maheśa	,,	210
11. Mahārāja Nṛpatiballabha Sarvatobhadra	Maheśvara	,,	213
12. Mahārāja Nṛpavallabha	Śambhu	,,	214
13. Pañcānana Vaṭī	Śaṅkara	,,	221
14. Vṛhat Agni Kumār Rasa	Maheśa	,,	224
15. Lokeśvara Rasa	Śambhu	,, R. C. IX	267 97
16. Catūrbhuja Rasa	Maheśa	,,	307
17. Śūtabhasma Prayoga	Mahādeva	,,	309
18. Viśveśvara Rasa	Viśvanātha	,,	338
19. Āmavātāri Vaṭikā	Pureśana	,,	341
20. Sūlarāja Lauha	Hara	,,	348
21. Vaidyanātha Vaṭī	Vaidyanātha	,,	356
22. Jogeśvara Rasa	Mahādeva	,,	401
23. Mahā Mṛtyuñjaya Rasa	Maheśa	,,	381
24. Vajrakṣāra	Pinākī	,,	403

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25. Candrānana Rasa	Bhairava	R. C., IX ,,	417 122
26. Vālarasa	Śiva	,,	465
27. Śrī Manmatha Rasa	Maheśa	,,	469
28. Vasantatilaka Rasa	Mṛtyuñjaya	,,	480
29. Makaradhvaja	Śiva	,,	480
30. Mahā Nīlakaṇṭha Rasa	Śambhu	,,	482
31. Jāraṇa and Bhakṣaṇa of Mica and Mercury	Iśvara Bhairava	R. C.	11 12
32. Cūrṇarāja	Rudra	,,	51
33. Candraprabhā Guṭikā	Śambhu	,,	86
34. Rasaśārddūla	Giriśa	,,	48
35. Śrī Kāmeśvara Modaka	Vaidyanātha	,,	61
36. Śiva Gutikā	Śiva	Śaiva Siddhvānta, C.D.	366
37. Kravyāda Rasa	Bhairava	,,	86
38. Śaṅkara Lauha	Śankara	B. P. II. ii.	292
39. Candraprabhā Vaṭī	Rudra	,, II. ii.	623
40. Mahā Bhallātaka Avaleha	Mahādeva	,, II. iv.	884
41. Rasālā	Makareśvara	,, III.	1179
42. Siṁhanāda Guggulu	Daṇḍapāṇi	C. D.	157
43. Formula to Cure Svitra	Vaidyanātha	,,	25
44. Kusumādya Taila	Devadeva	G. N., Vol. I.	46
45. Vṛhat Śiva Guṭikā	Giriśa	,,	124
46. Vyosādya Guṭikā	Śambhu Kālapāda	,, ,,	129
47. Vṛhat Sāyambhuva Guggulu	,,	,,	135
48. Kumāryāsava	Sūlapāṇi	,,	165
49. Nālikerāsava	Śambhu	,,	189
50. Vṛhat Sahacara Taila	,,	,,	209
51. Vijayā Guṭikā	Rudra	,,	232
52. Kaulītikā Vartī	Pinākī	,, Vol. II	454
53. Śūtabhasma	Śiva	R. P. S. III	30
54. Gandhaka Taila Pātana	Śambhu	,, VI	58
55. Vātanāśana Rasa	Bhairava	,, VIII	83
56. Tālakarāja Rasa	Bhairava	,, ,,	97
57. Svarṇa Sindūra	Pinākī	Saṁkṣipta Sāra	3
58. Pūrṇacandra Rasa	Śaṅkara	,,	4
59. Bhasmeśvara	Śambhu	Vaidya Joga Saṁgraha GOML, 13225	

Formulæ.	Authors.	Books.	Page.
60. Śītabhanjī Rasa	Rudra	Rasasaṅketa-kalikā	15
61. Putraprada Rasa	”	”	24
62. Sarvāvyādhihara	”	Rasasāra	82

1. CINTĀMAṆI RASA.

चिन्तामणिरसः ।

रसविषगन्धकटङ्कणताम्रवचारकं व्योषं ।
तालकफलत्रयञ्च चौद्रैः शतं वारान् ।
संमर्द्य रक्तिमितवटिका कार्य्या भिषग्भिः प्राज्ञैः ।
शुण्ठीपिष्टेन सममेकां द्वे वाथवा तिस्रः संप्राश्य ।
नारिकेलजलमनुपेयं सेवयेत्
सैन्धवं जीरं तक्रपथ्यं प्रयोक्तव्यं ।
प्रशमयति सन्निपातज्वरं
तथा जीर्णज्वरं विविधञ्च ॥
प्लीहानं चाध्मानकं कासं श्वासं वह्निमान्द्यञ्च ।
चिन्तामणिरसोऽयं किल स्वयं भैरवेण निर्द्दिष्टः ॥

2. SUCIKĀBHARAṆA RASA.

सूचिकाभरणीरसः ।

रसगन्धकनागञ्च विषं स्थावरजङ्गमं ।
मात्स्यवाराहमायूरछागपित्तैर्विभावयेत् ।
सूचिकाभरणो नाम भैरवेण प्रकीर्त्तितः ।
सूचिकाग्रेण दातव्यः सन्निपातनिवर्हणः ॥

3. MṚTASAÑJĪBANA RASA.

मृतसञ्जीवनीरसः।

शुद्धसूतं द्विधा गन्धं खल्ले तत् कज्जलीकृतं।
अभ्रलौहकयोर्भस्मताम्रभस्मसमं समं।
विषं तालं वराटञ्च शिलाहिङ्गुलचित्रकान्।
हस्तिशुण्डी चातिविषा त्र्यूषणं हेममाक्षिकं।
चूर्णं विमर्द्दयेद्द्रावैरार्द्रकस्य दिनत्रयं।
निर्गुण्डीविजयाद्रावैस्त्रिदिनं मर्द्दयेत् पुनः।
काचकुप्यां निवेश्याथ वालुकायन्त्रगे पचेत्।
त्रियामान्ते समुद्धृत्य मर्द्दयेदार्द्रकैर्द्रवैः।
मृतसञ्जीवनी नाम रसोऽयं शङ्करोदितः।
मृतोऽपि सन्निपातार्त्तो जीवत्येव न संशयः॥

4. ARDHANĀRĪŚVARA RASA.

अर्द्धनारीश्वरीरसः।

रसगन्धौ समौ शुद्धौ विषं ग्राह्यञ्च तत्समं।
जैपालं तत्समं ग्राह्यं मरिचञ्च चतुर्गुणं।
त्रिफलाया रसैर्म्मर्द्द्य भावना पञ्चधा तथा।
जम्बीराणां द्रवैर्न्नस्यमेकस्मिन्नासिकापुटे।
शरीरार्द्धगतं घोरं ज्वरं हन्ति न संशयः।
अर्द्धनारीश्वरो नाम रसः शम्भुप्रकीर्त्तितः॥

5. SARVVATOBHADRA RASA.

सर्व्वतोभद्ररसः।

विशुद्धं गगनं ग्राह्यं द्विकर्षं शुद्धगन्धकं।
लौहकं लौहकार्द्धञ्च हिङ्गुलोत्थरसस्तथा।
कर्पूरं केशरं मांसी तेजपत्रं लवङ्गकं।
जातीकोषफलञ्चैव सूक्ष्मैला करिपिप्पली।

कुष्ठं तालीशपत्रञ्च धातकीचोचमुस्तकं ।
हरीतकी मरिचञ्चशृङ्गवेर विभीतकं ।
पिप्पल्यामलकञ्चैव शाणभागं विचूर्णितं ।
सर्व्वमेकीकृतं पिष्ट्वा वटीं कुर्य्याद्द्विगुञ्जिकां ।
भक्षयेत् पर्णखण्डेन मधुना सितयापि वा ।
रोगं ज्ञात्वानुपानञ्च प्रातः कुर्य्याद्विचक्षणः ।
हन्ति मन्दानलान् सर्व्वान् आमदोषं विसूचिकां ।
पित्तश्लेष्मभवं रोगं वातश्लेष्मभवन्तथा ।
आनाहं मूत्रकृच्छ्रञ्चसंग्रहग्रहणीं वमिं ।
अम्लपित्तं शीतपित्तं रक्तपित्तं विशेषतः ।
चिरज्वरं पित्तभवं धातुस्थं विषमज्वरं ।
कासं पञ्चविधं हन्ति कामलां पाण्डुमेव च ।
सर्व्वलोकहितार्थाय शिवेन भाषितः पुरा ।
सर्व्वतोभद्रनामायं रसः साक्षान्महेश्वरः ॥

6. Cūḍāmaṇi Rasa.

चूड़ामणिरसः ।

मृतं सूतं प्रवालञ्च स्वर्णं तारञ्च वङ्गकं ।
शुल्वं मुक्ता तीक्ष्णमभ्रं सर्व्वमेकत्र योजयेत् ।
जलेन पिष्ट्वा वटिका कार्य्या वल्लप्रमाणतः ।
धातुस्थं सन्निपातोत्थं ज्वरं विषमसम्भवं ।
कामशोकसमुद्भूतं त्रिदोषजनितन्तथा ।
कासं श्वासञ्च विविधं शूलं सर्व्वाङ्गसम्भवं ।
शिरोरोगं कर्णशूलं दन्तशूलं गलग्रहं ।
वातपित्तसमुद्भूतं ग्रहणीं सर्व्वसम्भवां ।
आमवातं कटीशूलमग्निमान्द्यं विसूचिकां ।
अर्शांसि कामलां मेहं मूत्रकृच्छ्रादिकञ्च यत् ।
तत्सर्व्वं नाशयत्याशु विष्णुचक्रमिवासुरान् ।
चूड़ामणिरसो ह्येष शिवेन परिकीर्त्तितः ॥

7. Vṛhat Cūḍāmaṇi Rasa.

बृहच्चूड़ामणिरस: ।

कस्तूरिकाविद्रुमरौप्यलौहं
ताम्रं हिरण्यं रससिन्दूरञ्च ।
सुवर्णं सिन्दूरलवङ्गमौक्तिकं चोचं
घनं माक्षिकं राजपट्टं ।
गोक्षुरजातीफलजातीकोषं
मरिचकर्पूरशिखिग्रीवञ्च ।
प्रगृह्य सर्व्वं हि समं प्रयत्नात्
अथाश्वगन्धा द्विगुणं हि वैद्य: ।
वक्ष्यमाणौषधैर्भाव्यं प्रत्येकं मुनिसंख्यया ।
निर्गुण्डीफञ्जिकावासारविमूलत्रिकण्टकै: ।
तद्वीर्य्यं कथयिष्यामि वातिकं पैत्तिकं ज्वरं ।
कफोद्भवं द्विदोषोत्थं त्रिदोषजनितन्तथा ।
सन्ततं सततं हन्ति तृतीयकचतुर्थकौ ।
ऐकाहिकं द्व्याहिकञ्च विषमं भूतसम्भवं ।
नाशयेदचिरादेव वृक्षमिन्द्राशनिर्यथा ।
चूड़ामणिरसो ह्येष शिवेन परिभाषित: ॥

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8. Grahaṇīśārddūla Rasa.

ग्रहणीशार्द्दूलरस: ।

रसगन्धकयोश्चापि कर्षमेकं सुशोधितं ।
द्वयो: कज्जलिकां कृत्वा हाटकं षोड़शांशत: ।
लवङ्गं निम्बपत्रञ्च जातीकोषफले तथा ।
एतेषां कर्षचूर्णेन सूक्ष्मेलां सह मेलयेत् ।
मुक्तागृहेन संस्थाप्य पुटपाकेन साधयेत् ।
गुञ्जापञ्चप्रमाणेन प्रत्यहं भक्षयेन्नर: ।
सूतिकां ग्रहणीरोगं हरत्येष सुनिश्चितं ।

अर्शोघ्नो दीपनश्चैव वलपुष्टिप्रसादनः ।
कासश्वासातिसारघ्नो वलवीर्य्यकरः परः ।
दुर्व्वारं ग्रहणीरोगञ्चामशूलञ्च नाशयेत् ।
संसारलोकरक्षार्थं पुरा रुद्रेण भाषितः ॥

9. VAIDYANĀTHA VAṬĪ.

वैद्यनाथवटी ।

रसस्य शाणं संगृह्य काञ्जिकेन तु शोधयेत् ।
चित्रकस्य रसेनापि त्रिफलायाश्च वुद्धिमान् ।
रसार्द्धं गन्धकं शुद्धं भृङ्गराजरसेन वा ।
द्वाभ्यां संमूर्च्छनं कृत्वा स्वरसैः शाणसम्मितैः ।
खल्लयेत्त शिलाखण्डे क्रमशो वक्ष्यमाणजैः ।
निर्गुण्डीमधुकश्वेताकुठेर श्रीषसुन्दरैः ।
भृङ्गाव्दकेशराजैश्च तथा चेन्द्राशनोत्कटैः ।
सर्षपाभां वटीं कृत्वा दद्यात्तां ग्रहणीगदे ।
सामवानेऽग्निमान्द्ये च ज्वरे प्लीहोदरेषु च ।
वातश्लेष्मविकारेषु तथा श्लेष्मगदेषु च ।
अम्लतक्रादिसेवाञ्च कुर्व्वीत स्वेच्छया वहु ।
श्रीमता वैद्यनाथेन लोकानुग्रहकारिणा ।
स्वप्नान्त व्राह्मणस्येयं भाषिता लिखितेन तु ॥

10. NṚPAVALLABHA RASA.

नृपवल्लभो रसः ।

जातीफल-लवङ्गाव्द-त्वगेला-टङ्करामठं ।
जीरकं तेजपत्रञ्च यमानी विश्वसैन्धवं ।
लौहभस्मं मृताभ्रञ्च रसगन्धकमेव च ।
मरिचं त्रिवृतं रूप्यं प्रत्येकं द्विपलोन्मितं ।
धात्रीरसे वटीं कुर्य्यात् त्रिगुञ्जाफलमानतः ।
हन्ति शूलं तथा गुल्ममामवातं सुदारुणं ।

हृच्छूलं पार्श्वशूलञ्च चक्षुःशूलं हलीमकं ।
शिरःशूलं कटीशूलमानाहमष्टशूलकं ।
क्रिमि-कुष्ठानि-दद्रूनि वातरक्तं भगन्दरं ।
उपदंशमतीसारं ग्रहण्यर्शःप्रवाहिकां ।
नृपवल्लभरसोयं महेशेन प्रकाशितः ॥

11. MAHĀRĀJA NṚPATIVALLABHA RASA.

महाराजनृपतिवल्लभरसः ।

कर्षत्रयं मृतं कान्तं मृताभ्रं मृतताम्रकं ।
मृतं तारं माक्षिकञ्च कर्षं कर्षं प्रदापयेत् ।
मृतं स्वर्णं मृतं तारं टङ्कणं शृङ्गमेव च ।
वखिरं दन्तिमूलञ्च मरिचं तेजपत्रकं ।
यमानी वालकं मुस्तं शुण्ठकञ्च सधान्यकं ।
सिन्धूद्भवं सकर्पूरं विड़ङ्गं चित्रकं विषं ।
पारदं गन्धकञ्चैव तोलमानं प्रदापयेत् ।
तोलद्वयं त्रिवृच्चूर्णं लवङ्गं तच्चतुर्गुणं ।
जातीकोषफलञ्चैव वराङ्गकन्तु तत्समं ।
सर्व्वेषामर्द्धभागन्तु विड़कं तत्र मिश्रयेत् ।
सर्व्वमेकीकृतं यद्यत् त्रुटिचूर्णञ्च तत्समं ।
भावना च प्रदातव्या छागीदुग्धेन सप्तधा ।
मातुलुङ्गरसैः पश्चात् भावयेत् सप्तवारकं ।
छायाशुष्कां वटीं कृत्वा भक्षयेद्दशरक्तिकां ।

मन्दानलं संग्रहणीं प्रवृद्धा-
मामानुवन्धीं क्रिमिपाण्डुरोगं ।
ऊर्द्धाम्लपित्तं हृदयामयञ्च
गुल्मोदरानाहभगन्दरञ्च ।
अर्शांसि वै पित्तकृतानशेषान्
सामं सशूलाष्टकमेव हन्ति ।
साजीर्णविष्टम्भ-विसर्पदाह

विलम्बिकाञ्चाप्यलसं प्रमेहं ।
कुष्ठान्यशेषाणि च कासशोषं
हन्यात् सशोथं ज्वरमूत्रकृच्छ्रं ॥
मतान्तरे सर्व्वतोभद्रनाम
महेश्वरेणैव विभाषितोयं ॥

12. MAHĀRĀJA NṚPAVALLABHA.

महाराजनृपवल्लभः ।

माक्षिकं लौहमभ्रञ्च वङ्गं रजतहाटकं ।
ग्रन्थि यमानिका चोचं ताम्रं नागरटङ्कणं ।
सैन्धवं वालकं मुस्तं धान्यकं गन्धकं रसं ।
शृङ्गी कर्पूरकञ्चैव प्रत्येकं माषकोन्मितं ।
माषद्वयं रामठं स्यान्मरिचानां चतुष्टयं ।
जातीकोषं लवङ्गञ्च पत्रञ्च तोलकोन्मितं ।
नाभिशङ्खं विड़ङ्गञ्च शाणं माषद्वयं विषं ।
कर्षषट्कं सतिमाषं सूक्ष्मैलानां ततः क्षिपेत् ।
विड़ं कर्षद्वयं सर्व्वं छागीक्षीरेण पेषयेत् ।
चतुर्गुञ्जमितं खादेत् सानाहग्रहणीं जयेत् ।
शम्भुना निर्म्मितो ह्येष पूर्व्ववद् गुणकारकः ।
नाम्ना महाराजपूर्व्वो नृपवल्लभ उच्यते ॥

13. PAÑCĀNANA VAṬĪ.

पञ्चानन वटी ।

मृतसूताभ्रलौहानि मृतार्कगन्धकैः सह ।
सर्व्वाणि समभागानि भल्लातं सर्व्वतुल्यकं ।
वन्यशूरणकन्दोत्थैर्द्रवैः पलप्रमाणतः ।
मर्द्दयेद्दिनमेकञ्च माषमात्रं पिबेद्घृतैः ।
असाध्येष्वपि कर्त्तव्या चिकित्सा शङ्करोदिता ।
कुष्ठरोगं निहन्त्याशु मृत्युरोगविनाशिनी ॥

14. VṚHAT AGNI KUMĀRA RASA.

बृहदग्निकुमारो रसः।

शुद्धसूतं द्विधा गन्धं गन्धतुल्यञ्च टङ्कणं ।
फलत्रयं यवक्षारं व्योषं पञ्चपटूनि च ।
द्वादशैतानि सर्व्वाणि रसतुल्यानि दापयेत् ।
संमर्द्द्य सप्तधा सर्व्वं भावयेदार्द्रकद्रवैः ।
संशोष्य चूर्णयित्वा तु भक्षयेदार्द्रकाम्बुना ।
शाणमात्रं वयो वीक्ष्य नानाजीर्णप्रशान्तये ।
रसश्चाग्निकुमारोयं महेशेन प्रकाशितः ।

महाग्निकारकश्चैव कालभास्करतेजसां ।
अग्निमान्द्यभवान्रोगान् शोथं पाण्ड्वामयं जयेत् ।
दुर्नामग्रहणीसामरोगान् हन्ति न संशयः ।
यथेष्टाहारचेष्टस्य नास्यत्र नियमः क्वचित् ॥

15. LOKEŚVARA RASA.

लोकेश्वरोरसः।

पलं कपर्द्दचूर्णस्य पलं पारदगन्धयोः।
माषञ्च टङ्कणस्यैव जम्बीराद्भिर्व्विमर्द्दयेत् ।
पुटेल्लोकेश्वरोनाम्ना लोकनाथरसोत्तमः ।

हन्ति कुष्ठं रक्तपित्तजन्यान् रोगान् बलाज्जयेत् ।
पुष्ट वीर्य्य प्रसादौजःकान्तिलावण्यदः परः ।
कोऽस्ति लोकेश्वरादन्यो नृणां शम्भुमुखोद्गतः ।

पथ्यं शाल्योदनं सर्पिर्दधिशाकं सहिङ्गुकं ।
नित्यं यामद्वयादूर्द्धं कार्य्यं वारत्रयं दिवा ।
त्र्यहान्तेऽरुचिवान्ते वा लग्नः सूतो न चेत् पुनः ।
अष्टमेऽह्नि प्रदातव्यः पूर्व्ववत् कार्य्यसिद्धये ।
प्रथमे सप्तमे देया लावणगुरणसुद्धकाः ।
द्वितीये माषगोधूमं भक्ष्यं पूर्व्वोदितञ्च यत् ।

देयानि मत्स्यमांसानि तृतीये मर्द्दनादिकं ।
तैलं विल्वारणालानि कोपस्त्रीस्वप्नजागरान् ।
त्यजेत् कादीनि द्रव्याणि हृद्यं स्वादु च शीलयेत् ।
वान्तौ सेव्यं पयः कोष्णं पित्ते तु ससितं हितं ।
अत्यग्नौ चोरवीजानि तिलचुकदलीफलं ।
खर्ज्जूरमांसमृद्वीकासितादिसकलं भजेत् ।
वीर्य्यच्युतौ नारिकेलजलं तालफलानि च ।
आनाहारुचिमूर्च्छार्त्तिधूमोद्गारविसूचिकाः ।
एतेषु लघु शाल्यन्नं केवलं सघृतं हितं ।
अतिवान्तौ पिबेच्छिन्नारसं क्षौद्रेण संयुतं ।
सक्षौद्रं वासकं रक्तपित्ते रुचिविपर्य्यये ।
भृष्टधान्यं सितायुक्तमथवाक्षौद्रसंयुतं ।
यवान्नं मधुसंयुक्तं पिबेद्वा महिषं दधि ।
यवान्नं भक्षयेन्नित्यं सुखोष्णेन च वारिणा ।
छिन्नाम्बुसहितं देयं दाहे जीर्णं सुधाजलं ।
आर्द्रकं सर्षपं रम्भाफलं भृष्टं कफोल्वणे ।
अन्येऽप्युपद्रवा ये स्युस्तत्तच्छान्त्यै यथौषधं ।
द्वात्रिंशद्दिवसे कार्य्यं स्नानमामलकैस्तिलैः ।
युक्तं द्रव्यं वशे जाते शनैरग्निबलादनु ॥

16. CATURBHUJA RASA.

चतुर्भुजरसः ।

मृतसूतस्य भागौ द्वौ भागैकं हेमभस्मकं ।
शिला कस्तूरिका तालं प्रत्येकं हेमतुल्यकं ।
सर्व्वं खल्लतले क्षिप्ता कन्यया मर्द्दयेद्दिनं ।
एरण्डपत्रैरावेष्ट्य धान्यगर्भे दिनत्रयं ।
संस्थाप्य च तदुद्धृत्य सर्व्वरोगेषु योजयेत् ।
एतद्रसायनवरं त्रिफलामधुमर्द्दितं ।
तद् यथाग्निबलं खादेद्वलीपलितनाशनं ।

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अपस्मारे ज्वरे कासे शोषे मन्दानले क्षये ।
हस्तकम्पे शिर:कम्पे गात्रकम्पे विशेषत: ।
वातपित्तसमुत्थांश्च कफजान् नाशयेद्ध्रुवं ।
सर्व्वौषधि प्रयोगैर्ये व्याधयो नप्रसाधिता: ।
कर्म्मभि: पञ्चभिश्चैव सर्व्वौषधि प्रयोगत: ।
सर्व्वांस्तान् नाशयत्याशु वृक्षमिन्द्राशनिर्य्यथा ।
ततुर्भुजरसो नाम महेशेन प्रकाशित: ॥

17. Sutabhasma Prayoga.

सूतभस्मप्रयोग: ।

शङ्खपुष्पी वचा ब्राह्मी कुष्ठमेला रसै: सह ।
सूतभस्मप्रयोगोऽयं रक्तिकाद्वयमानत: ।
सर्व्वापस्मारनाशाय महादेवेन भाषित: ॥

18. Viśveśvara Rasa.

विश्वेश्वरोरस: ।

रसाद्दश विषात् पञ्च गन्धकाद्दश शोधितात् ।
तुल्याद्दश पलाशस्य बीजेभ्य: पञ्च कारयेत् ।
क्षुद्राश्मसार-धूस्तूर-करहाटक नीलीत: ।
दशकं दशकं कुर्य्याच्छोषयित्वा जटात्वच: ।
दशकं दशकं दत्वा कुचिल्लाद्दश नूतनात् ।
भल्लातकाच्च दशकं चूर्णयित्वा भिषक् तत: ।
सुदिवसे बलिं दत्वा वैद्य: पूजापरायण: ।
रक्तिका द्वितयं दद्यात् सहते यदि वा त्रयं ।
वातरक्तं ज्वरं कुष्ठं खरस्पर्शमसौख्यदं ।
आजानुस्फुटितं हन्ति विषजं वास्थिनि:सृतं ।
कुष्ठमष्टादशविधमग्निमान्द्यमरोचकं ।
विश्वेश्वरो रसोनाम विश्वनाथेन भाषित: ॥

वक्ष्यते कुष्ठरोगे यदौषधं भिषजां वरैः ।
वातरक्ते प्रयुञ्जीत कुर्य्याच्च रक्तमोक्षणं ॥

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19. ĀMAVĀTĀRI VAṬIKĀ.

आमवातारि वटिका ।

रसगन्धकलौहाभ्रं तुल्यं टङ्कणसैन्धवं ।
समभागं विचूर्ण्याथ चूर्णाद्द्विगुणगुग्गुलुः ।
गुग्गुलोः पादिकं देयं चित्रतामूलवल्कलं ।
तत् समं चित्रकं देयं घृतेन परिमर्द्दयेत् ।
खादेन्माषद्वयञ्चास्य त्रिफलाचूर्णयोगतः ।
आमवातारि वटिका पाचिका भेदिका मता ।
आमवातं निहन्त्याशु गुल्मशूलोदराणि च ।
यकृत्प्लीहोदराष्ठीला-कामलापाण्डुरोगकान् ।
ग्रन्थिशूलं शिरःशूलं वातरोगञ्च गृध्रसीं ।
गलगण्डं गण्डमालां क्रिमिकुष्ठभगन्दरान् ।
विद्रधिमन्त्रवृद्धिञ्च अर्शांसि गुदजानि च ।
आमवातारि वटिका पुरेशानेन चोदिता ॥

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20. ŚŪLARĀJA LAUHA.

शूलराजलौहम् ।

कर्षैकं कान्तलौहस्य शुद्धमभ्रं पलन्तथा ।
सितायाश्च पलञ्चैकं मधुसर्पिस्तथैव च ।
सर्व्वमेकीकृतं पात्रे लौहदण्डेन मर्द्दयेत् ।
त्रिकटु त्रिफलामुस्तं विड़ङ्गं चव्यचित्रकं ।
प्रत्येकं तोलकं मानं चूर्णितं तत्र दापयेत् ।
भक्षयेत् प्रातरुत्थाय शिशिराम्बुनुपानतः ।
सर्व्वदोषभवं शूलं कुक्षिशूलञ्च यत्भवेत् ।
हृच्छूलं पार्श्वशूलञ्च अम्लपित्तञ्च नाशयेत् ।

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अर्शांसि ग्रहणीदोषं प्रमेहांश्च विसूचिकां।
शूलराजमिदं लौहं हरेन परिनिर्म्मितं ॥

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21. VAIDYANĀTHA VAṬĪ.

वैद्यनाथवटी।

पथ्या त्रिकटु सूतञ्च द्विगुणं कानकन्तथा।
थानकुनीरसैरम्ललोलिकायारसैः कृता।
गुड़िकोदरगुल्मादिपाण्डुामयविनाशिनी।
क्रिमि-कुष्ठ-गात्रकण्डू पीड़कांश्च निहन्ति च।
गुड़ी सिद्धफला चेयं वैद्यनाथेन भाषिता ॥

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22. JOGEŚVARA RASA.

योगेश्वरोरसः।

सूतकं गन्धकं लौहं नागञ्चापि वराटिकां।
ताम्रकं वङ्गभस्मापि व्योमकञ्च समांशिकं।
सूक्ष्मैलापत्रमुस्तञ्च विड़ङ्गं नागकेशरं।
रेणुकामलकञ्चैव पिप्पलीमूलमेव च।
एषाञ्च द्विगुणं भागं मर्द्दयित्वा प्रयत्नतः।
भावना तत्र दातव्या धात्रीफलरसेन च।
मात्रा चणकतुल्या च गुड़िकेयं प्रकीर्त्तिता।
प्रमेहं बहुमूत्रञ्च अश्मरीं मूत्रकृच्छ्रकं।
व्रणं हन्ति महाकुष्ठमर्शांसि च भगन्दरं।
योगेश्वरोरसोनाम महादेवेन भाषितः ॥

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23. MAHĀ MṚTYUÑJAYA RASA.

महामृत्युञ्जयोरसः।

रसगन्धकलौहाभ्रं कुनटीतुत्थतास्रकं।
सैन्धवञ्च वराटञ्च वागुजी विड़शङ्खकं।

चित्रकं हिङ्गुकटुकी द्विक्षारं कट्फलन्तथा ।
रसाञ्जनं जयन्ती च टङ्कणं समभागिकं ।
एतत्सर्व्वं विचूर्ण्याथ दिनमेकं विभावयेत् ।
आर्द्रकस्वरसेनैव गुड़ूच्याःस्वरसेन च ।
गुञ्जामात्रां वटीं कृत्वा भक्षयेन्मधुना सह ।
नानारोगप्रशमनो यकृद्गुल्मोदराणिच ।
अग्रमांसं तथा प्लीहामग्निमान्द्य-मरोचकं ।
एतान् सर्व्वान् निहन्त्याशु भास्करस्तिमिरं यथा ।
महामृत्युञ्जयोनाम महेशेन प्रकाशितः ॥

24. VAJRAKṢĀRA.

वज्रक्षारम् ।

सामुद्रं सैन्धवं काचं यवक्षारं सुवर्च्चलं ।
टङ्कणं स्वर्ज्जिकाक्षारन्तुल्यं सर्व्वं विचूर्णयेत् ।
अर्कक्षीरैः स्नुहीक्षीरैरातपे भावयेत्त्र्यहं ।
तेन लिप्तार्कपत्रस्थं रुद्ध्वाचान्तः पुटे पचेत् ।
तत्क्षारं चूर्णयेत् पश्चात् त्र्यूषणन्त्रिफलारजः ।
जीरकं रजनीवह्निनवभागं समं समं ।
क्षाराद्धमेव सर्व्वस्य एकीकृत्य प्रयोजयेत् ।
वज्रक्षारमिदं सिद्धं स्वयं प्रोक्तं पिनाकिना ।
सर्व्वोदरेषु गुल्मेषु शूलदोषेषु योजयेत् ।
अग्निमान्द्याप्यजीर्णेऽपि भक्ष्यं निष्कद्वयं द्वयं ।
वाताधिके जलं कोष्णं घृतं वा पैत्तिके हितं ।
कफे गोमूत्रसंयुक्तं मारनालं त्रिदोषजे ॥

25. CANDRĀNANA RASA.

चन्द्राननोरसः ।

सूतव्योमाभ्रयस्तुल्यास्त्रिभागो गन्धकस्य च ॥
काठोडुम्बरिकाक्षीरैः सर्व्वमेकत्र मर्द्दयेत् ।

माषमात्रां गुड़ीं कृत्वा कुष्ठरोगे प्रयोजयेत् ।
देहशुद्धिं पुरा कृत्वा सर्व्वकुष्ठानि नाशयेत् ।
एष चन्द्राननो नाम साक्षात् श्रीभैरवोदितः ॥

26. VĀLA RASA.

वालरसः ।

पलं शुद्धस्य सूतस्य गन्धकस्य पलं तथा ।
सुवर्णमाक्षिकस्यापि भागार्द्धं संप्रकल्पयेत् ।
ततः कज्जलिकां कृत्वा लौहपात्रमये दृढ़े ।
केशराजस्य भृङ्गस्य निर्गुण्ड्याः स्वरसेन च ।
शुभे शिलामये पात्रे लौहदण्डेन मर्द्दयेत् ।
राजिकासदृशीञ्चैव वटिकां कारयेद्भिषक् ।
एकैकां वटिकां खादेन्नागपल्लीदलद्रवैः ।
हन्ति त्रिदोषसम्भूतं ज्वरञ्चैव सुदारुणं ।
चिरज्वरञ्च कासञ्च शूलं सर्व्वभवन्तथा ।
शिशूनां रोगनाशाय शिवेन परिकीर्त्तितः ॥

27. SRĪ MANMATHA RASA.

श्रीमन्मथरसः ।

रसगन्धकयोग्राह्यं कर्षमेकं सुशोधितं ।
अभ्रं निश्चन्द्रकं दद्यात् पलार्द्धं सुविचक्षणः ।
कर्पूरं शाणकं दद्याद्वङ्गञ्च कोलसम्मितं ।
ताम्रं कोलार्द्धकं तत्र निःशेषमारितं क्षिपेत् ।
लौहं कर्षं सुजीर्णञ्च वृद्धदारकवीजकं ।
विदारी शतमूली च क्षुरवीजं वला तथा ।
मर्कटातिवला चैव जातीकोषफले तथा ।
लवङ्गं विजयावीजं श्वेतसर्ज्जं यमानिका

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एतेषां चूर्णमादाय प्रक्षिपेत् शाणसम्मितं ।
गुञ्जाद्वयञ्च भोक्तव्यं कोष्णं क्षीरं पिवेदनु ।
गृहे यस्य शतं स्त्रीणां विद्यन्तेऽतिव्यवायिनः ।
न तस्य लिङ्गशैथिल्यमौषधस्यास्य सेवनात् ।
न च शुक्रं क्षयं याति न वलं ह्रासतां व्रजेत् ।
कामरूपी भवेद्दिव्यो वृद्धः षोड़शवर्षवत् ।
रसायनवरो वल्यो वाजीकरण-उत्तमः ।
रसः श्रीमन्मथो नाम महेशेन प्रकाशितः ॥

28. VASANTATILAKA RASA.

वसन्ततिलकोरसः ।

हेम्नोभस्मकतोलकं घनं द्विगुणितं लौहात्त्रयः पारदा ।
चत्वारो नियतन्तु वङ्गयुगलञ्चैकीकृतं मर्द्दयेत् ।
मुक्ताविद्रुमयो रसेन समता गोक्षुरवासेक्षुणा ।
सर्व्वं वन्यकरीषकेण सुदृढं तत्तत् पचेत् सप्तधा ।
कस्तूरीघनसारमर्द्दितरसः पश्चात् सुसिद्धो भवेत्।
कासश्वास-सपित्तवातकफजित् पाण्डुक्षयादीन् हरेत् ।
शूलादिग्रहणीं विषादिहरणो मेहां स्तथा विंशतिं ।
हृद्रोगादिहरो ज्वरादिशमनो वृष्यो वयोवर्द्धनः ।
श्रेष्ठः पुष्टिकरो वसन्ततिलको मृत्युञ्जयेनोदितः ॥

29. MAKARADHVAJA.

मकरध्वजः ।

स्वर्णस्य भागो वङ्गञ्च मौक्तिकं कान्तलौहकं ।
जातीकोषफले रूप्यं कांस्यकं रससिन्दूरं ।
प्रवालं कस्तूरी चन्द्रभस्मकञ्चैकभागिकं ।
स्वर्णसिन्दूरतो भागाश्चत्वारः कल्पयेद्बुधः ।

नातः परतरः श्रेष्ठः सर्व्वरोगनिसूदनः ।
सर्व्वलोकहितार्थाय शिवेन परिकीर्त्तितः ॥

30. MAHĀ NĪLAKAṆṬHA RASA.

महानीलकण्ठरसः ।

पलैकं नागभस्माथ भावयेत्तिमिपित्ततः ।
तन्नागं सुमृतं स्वर्णं तोलैकं वापि मिश्रयेत् ।
द्विपलं भस्मसूतस्य त्रिपलं मृतमभ्रकं ।
त्रिपलं लौहभस्माथ सर्व्वमेकत्र कारयेत् ।
भावयेच्च पृथक् कन्या ब्राह्मीनिर्गुण्डिका शमी ।
मुण्डी शतावरी छिन्ना कोकिलाक्षस्य बीजकैः ।
मूषली वृद्धदारोग्निद्रवैरेभिर्भिषग्वरः ।
ततः सञ्चूर्णयेत् सर्व्वं तुल्यमेकादशाभिधं ।
वराव्योषाब्दचङ्गेला जातीफललवङ्गकं ।
पूजयेद्वृषपुष्पाद्यैर्नीलकण्ठं महेश्वरं ।
द्विगुञ्जं भक्षयेदस्य मृत्युञ्जयमनुस्मरन् ।
क्षयमेकादशविधं ग्रहणीं रक्तपित्तकं ।
विविधान् वातजान् रोगान् चत्वारिंशच्च पैत्तिकान् ।
हन्ति सर्व्वामयानेव कामिनीनां शतं व्रजेत् ।
यथेष्टाहारचेष्टो हि कन्दर्पसदृशो नरः ।
मेधावी बलवान् प्राज्ञो वह्वाशी भीमविक्रमः ।
पुत्त्रार्थिनी तथा नारी सैव पुत्त्रं प्रसूयते ।
अस्य सूतस्य माहात्म्यं वेत्ति शम्भुर्नचापरः ॥

31. JĀRANA AND BHAKṢAṆA OF MICA AND MERCURY.

इत्यनुवासनं ।

जारणा हि नाम पातनगालनव्यतिरेकेण घनहेमादिग्रासपूर्व्वकपूर्व्वावस्थाप्रतिपन्नत्वं । किञ्चघनहेमादिलौहजीर्णस्य क्षतचेचीकरणानामेव शरीरिणां भक्षणेऽधिकार इत्यभिहितम । फलञ्चास्य स्वयमीश्वरेणोक्तं ॥१५॥

सर्व्वपापक्षये जाते प्राप्यते रसजारणा ।
तत्प्राप्तौ प्राप्यमेव स्याद्विज्ञानं मुक्तिलक्षणं ।
मोक्षाभिव्यञ्जकं देवि जारणात् साधकस्य तु ।
स्ववस्तुपिण्डिका देवि रसेन्द्रो लिङ्गमुच्यते ॥
मर्द्दनं वन्दनञ्चैव ग्रासः पूजाभिधीयते ॥
यावद्दिनानि वह्निस्थो जारणे धार्य्यते रसः ।
तावद्वर्षसहस्राणि शिवलोके महीयते ॥
दिनमेकं रसेन्द्रस्य यो ददाति हुताशनं ।
द्रवन्ति तस्य पापानि कुर्व्वन्नपि न लिप्यते ॥१६॥

अथ ग्रासनादिविधिः ।

अजारयन्नभ्रमहेमगन्धं
वाञ्छन्ति सूतात् फलमप्युदारं ।
क्षेत्रादनुप्तादपि शस्यजातं
कृषीवलास्ते भिषजश्च मन्दाः ॥

शुल्वगन्धेषु जीर्णे तु शुद्धाच्छतगुणाधिकः ।
षड्गुणे गन्धके जीर्णे रसो भवति रोगहा ॥
तुल्ये तु गन्धके जीर्णे शुद्धाच्छतगुणो रसः ।
द्विगुणे गन्धके जीर्णे सर्व्वकुष्ठहरः परः ॥
त्रिगुणे गन्धके जीर्णे सर्व्वजाड्यविनाशनः ।
चतुर्गुणे तत्र जीर्णे वलीपलितनाशनः ॥
गन्धे पञ्चगुणे जीर्णे क्षये क्षयहरो रुजः ।
षड्गुणे गन्धके जीर्णे सर्व्वरोगहरो रसः ॥
अवश्यमित्युवाचेन्द्रं शिवः श्रीभैरवः स्वयं ।

गन्धपिष्टिकया तत्र गोलः स्याद्गन्धजारणे ॥
तस्माच्छतगुणो व्योमसत्त्वे जीर्णे तु तत्समे ।
ताप्यखर्परतालादिसत्त्वे जीर्णे गुणावहः ॥
हेम्नि जीर्णे सहस्रैकगुणसंघप्रदायकः ।
वज्रादिजीर्णसूतस्य गुणान् वेत्ति शिवः स्वयं ॥

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32. CURṆARĀJA.[1]

चूर्णराजः ।

चूर्णराजस्तथा चायं स्वयं रुद्रस्य भाषितः ।
जगतामुपकाराय दुर्णामारिरयं ध्रुवम् ॥
स्थानादपैति मेरुश्च पृथ्वी पर्य्येति वा पुनः ।
पतन्ति चन्द्रताराश्च मिथ्या चेदं नहि ध्रुवम् ॥
ब्रह्महन्तृकृतघ्नाश्च क्रुराश्चासत्यवादिनः ।
वर्ज्जनीया विदग्धेन भिषजा गुरुनिन्दकाः ॥

33. CANDRAPRABHĀ GUḌIKĀ.

चन्द्रप्रभागुड़िका ।

क्रिमिरिपुदहनव्योषत्रिफलामरदारुचव्यभूनिम्बम् ।
मागधिमूलं मुस्तं सशठीवचं माक्षिकञ्चैव ॥
लवणक्षारनिशायुगकुस्तुम्बुरुगजकणातिविषाः ।
कर्षांशिकान्येव समानि कुर्य्यात्
पलाष्टकं चाश्मजतोर्विदध्यात् ॥
निस्त्वक्शुद्धस्य पुरस्य धीमान्
पलद्वयं लोहरजस्तथैव ।
सिताचतुष्कं पलमत्र वांश्या
निकुम्भकुम्भत्रिसुगन्धियुक्तम् ॥
चन्द्रप्रभेयं गुड़िका प्रयोज्या
अर्शांसि निर्णाशयते षड़ेव ।
भगन्दरं पाण्डुककामलाश्च
निर्णष्टवह्नेः कुरुते च दीप्तिम् ॥
हन्त्यामयान् पित्तकफानिलोत्थान्
नाड़ीगते मर्म्मगते व्रणे च ।
ग्रन्थ्यर्ब्बुदे विद्रधिराजयक्ष्मणि
मेहे भगाख्ये प्रवले च योज्या ॥

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[1] This formula is the same as the formula No. 38, Śaṅkara Lauha, described in page 64.

शुक्रक्षये चाश्मरिमूत्रकृच्छ्रे
शुक्रप्रवाहेऽप्युदरामये च ।
भक्तस्य पूर्व्वं सततं प्रयोज्या
तक्रानुपानं त्वथमस्तुपानं ॥
आजीरसो जाङ्गलजीरसों वा
पयोऽथवा शीतजलानुपानम् ।
बलेन नागस्तुरगो जवेन
दृष्ट्या सुपर्णः श्रवणे वराहः ॥
शुक्रदोषान् निहन्त्यष्टौ
प्रमेहानपि विंशतिम् ।
वलीपलितनिर्म्मुक्तो
वृद्धोऽपि तरुणायते ॥
न पानभोज्ये परिहार्य्यमस्ति
न शीतवातातपमैथुनेषु ।
शम्भुं समभ्यर्च्च्य कृतप्रसादे-
नाम्नागुडीचन्द्रमसा प्रसादात् ॥
अभ्रमाक्षिकं स्वर्णमाक्षिकम्
युगशब्दस्य त्रिष्वे व सम्बन्धः ।
तेन सैन्धवसौवर्चले यवक्षार
सर्जिकाक्षारौ हरिद्रादारुहरिद्रे ॥

किञ्च दशमूलक्काथे चतुर्गुणे उष्णे पचादिरहितनिरवकरगुग्गलुं प्रक्षिप्यालोड्य वस्त्रपूतं विधाय प्रचण्डातपे विशोष्य पिण्डितगुग्गलोः पलद्वयम् । सिताचतुष्कमिति पलचतुष्कं । निकुम्भोदन्ती, कुम्भस्त्रिवृता, एतयोः प्रत्येकं पलमेकं । छायाशुष्कावटी कार्य्या ॥

34. RASA SĀRDDŪLA.

रसशार्द्दूलः ।

बलिःसूतौनिम्बुरस समरसौ भस्म सिकता
क्षयेयन्ते कृत्वा समरविकणाटङ्कणरजः ।

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त्रिघस्रं लुङ्गाम्भोलवकदलितक्षौद्रहविषा
विलीढोमाषैकं दरयति समस्तं गदगणम् ॥
जरां वर्षैकेन क्षपयति च पुष्टिं वितनुते
तनोस्तेजस्कारं रमयति वधूनामपि शतम् ।
रसः श्रीमान् मृत्युञ्जय इति गिरीशेन गदितः
प्रभावं कोवास्यः कथयितुमपारं प्रभवति ॥
लुङ्गाम्भोलवकदलित इति मातुलुङ्गद्रवं कर्षणो दत्त्वा त्रिदिनं मर्द्दयेदित्यर्थः ॥

35. Srī Kāmeśvara Modaka.

श्रीकामेश्वरमोदकः ।

सम्यङ्मारितमभ्रकं कट्फलं कुष्ठाश्वगन्धामृताः ।
मेथीमोचरसौ विदारिमुसली गोक्षुरकक्षेरकम् ।
रम्भाकन्दशतावरी त्वजमुदा माषास्तिला धान्यकम् ।
यष्टीनागबला बला मधुरिका जातीफलं सैन्धवम् ।
भार्गीकर्कटशृङ्गकं त्रिकटुकं जीरद्वयं चित्रकम् ।
चातुजातपुनर्णवा गजकणा द्राक्षाशटी वासकं ।
बीजं मर्कटिशाल्मलीभवमिदं चूर्णसमं कल्पयेत् ।
चूर्णार्द्धविजया सिता द्विगुणिता मध्वाज्ययोः पिण्डितम् ।
कर्षार्द्धं गुडिकाथ कर्षमथवा सेव्या सता सर्व्वदा ।
पेयं क्षीरयुतं सुवीर्य्यकरणी स्तम्भेऽप्ययं कामिनाम् ।
वामावश्यकरः सुखातिसुखदः प्रौढाङ्गनाद्रावकः ।
क्षीणे पुष्टिकरो क्षयक्षयकरो हन्त्याशु सर्व्वामयम् ।
कासश्वासमहातिसारशमनो मन्दाग्निसन्दीपनः ।
दुर्णामग्रहणीप्रमेहनिवहश्लेष्मास्रपित्तप्रणुत् ।
नित्यानन्दकरो विशेषकविताबाचां विलासोद्भवं ।
धत्ते सर्व्वगुणं महास्थिरमतिर्व्वाली नितान्तोत्सवः ।
अभ्यासेन विहन्ति मृत्युपलितं कामेश्वरो वत्सरात् ।
सर्व्वेषां हितकारिणा निगदितः श्रीवैद्यनाथेन सः ।

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वृद्धानां मदनोदयोदयकरः प्रौढ़ाङ्गनासेवने ।
सिद्धोऽयं मम दृष्टिप्रत्ययकरोभूपैः सदा सेव्यताम् ॥

36. Śiva Guḍikā.

शिवा गुड़िका ।

काले तु रवितापाढ्ये कृष्णायसजं शिलाजतुप्रवरम् ।
त्रिफलारससंयुक्तं त्र्यहञ्च शुष्कं पुनः शुष्कम् ॥
दशमूलस्य गुड़ूच्या रसे बलायास्तथा पटोलस्य ।
मधुकरसैर्गोमूत्रे त्र्यहं त्र्यहं भावयेत् क्रमशः ॥
एकाहं क्षीरेण तु तत् पुनर्भावयेच्छुष्कम् ।
सप्ताहं भाव्यं स्यात् क्वाथैरेषां यथालाभम् ॥
काकोल्यौ द्वे मेदे विदारीयुग्मं शतावरी द्राक्षा ।
ऋद्धियुगर्षभवीरामुण्डितिका जीवकोऽंशुमत्यौ च ॥
रास्नापुष्करचित्रकदन्तीभकणाकलिङ्गचव्याब्दाः ।
कटुका शृङ्गी पाठे तानि पलांशिकानि कार्य्याणि ॥
अब्द्रोणे साधितानां रसेन पादांशिकेन भाव्यानि ।
गिरिजस्यैवं भावितशुद्धस्य पलानि दश षट् च ॥
द्विपलञ्च विश्वमागधिकाकटुकर्कटाख्यमरिचानाम् ॥
चूर्णं पलञ्च विदार्य्यास्तालीशपलानि चत्वारि ॥
षोड़श सितापलानि चत्वारि घृतस्य माक्षिकस्याष्टौ ।
तिलतैलस्य द्विपलं चूर्णार्द्धपलानि पञ्चानाम् ॥
त्वक्क्षीरिपत्रत्वङ्नागैलानां मिश्रयित्वा तु ।
गिरिजस्य षोड़शपलैर्गुड़िकाः कार्य्यास्ततोऽक्षसमाः ।
ताः शुष्का नवकुम्भे जातीपुष्पाधिवासिते स्थाप्याः ॥
तासामेका काले भक्ष्या पेयापि वा सततम् ॥
क्षीररसदाड़िमरसाः सुरासवं मधु च शिशिरतोयानि
आलोड़नानि तासामनुपाने वा प्रशस्यन्ते ।
जीर्णे लघ्वन्नपयोजाङ्गलनिर्य्यूहयूषभोजी स्यात् ।
सप्ताहं यावदतःपरं भवेत् सर्व्वं सामान्यम् ॥

भुक्तापि भक्षितेयं यदृच्छया नावहेद्भयं किञ्चित् ।
निरुपद्रवा प्रयुक्ता सुकुमारकैः कामिभिश्चैव ॥
संवत्सरप्रयुक्ता हन्त्येषा वातशोणितं प्रबलम् ।
बहुवार्षिकमपि गाढं यक्ष्माणञ्चाढ्यवातञ्च ॥
ज्वरयोनिशुक्रदोषप्लीहार्शःपाण्डुग्रहणीरोगान् ।
व्रध्नवमिगुल्मपीनसहिक्काकासारुचिश्वासान् ॥
जठरं श्वित्रं कुष्ठं षाण्ड्यं क्लैव्यं मदं क्षयशोषम् ।
उन्मादापस्मारौ वदनाक्षिशिरोगदान् सर्व्वान् ॥
आनाहमतीसारं सासृग्दरं कामलाप्रमेहांश्च ।
यकृदर्व्वुदानि विद्रधिभगन्दरं रक्तपित्तञ्च ॥
अतिकार्श्यमतिस्थौल्यं स्वेदमथ श्लीपदञ्च विनिहन्ति ।
दंष्ट्राविषं समौलं गराणि बहुप्रकाराणि ॥
सर्व्वौषधियोगान् विप्रयुक्तान् भौतिकांस्तथा भावान् ।
पापालक्ष्मीं चेयं शमयेद्गुड़िका शिवा नाम्ना ॥

बल्या वृष्या धन्या कान्तियशःश्रीप्रजाकरी चेयम् ।
दद्यान्नृपवल्लभतां जयं विवादे सुखस्था च ॥
श्रीमान् प्रकृष्टमेधाः स्मृतिबुद्धिबलान्वितोऽतुलशरीरः ।
पुष्टोजोऽतिविमलेन्द्रियतेजोबलसम्पदुपेतः ॥
बलीपलितरोगरहितो जीवेच्छरदां शतद्वयं पुरुषः ।
संवत्सरप्रयोगाद्द्वाभ्यां शतानि चत्वारि ।
सर्व्वामयजित् कथितं मुनिगणभक्ष्यं रसायनरहस्यम् ॥
समुद्भूवामृतमन्थनोत्थः स्वेदः शिलाभ्यो स्रुतवद्गिरेः प्राक् ।
यो मन्दरस्यात्मभुवा हिताय न्यस्तः स शैलेषु शिलाजरूपी ॥
शिवागुड़िकेति रसायनमुक्तं गिरीशेन गणपतये ।
शिववदनविनिर्गता यस्मान्नाम्ना तस्माच्छिवा गुड़िका ॥

शैवसिद्धान्तोक्तो शिवागुड़िकेयम् ।

37. KRAVYĀDA RASA.

क्रव्यादरसः ।

द्विपलं गन्धकं शुद्धं द्रावयित्वा विनिक्षिपेत् ।
पारदं पलमानेन मृतशुल्वायसी पुनः ॥
तेन मानेन संमिश्र्य पञ्चाङ्गुलदले क्षिपेत् ।
ततो विचूर्ण्य यत्नेन निक्षिप्यायसपावके ।
चूल्ल्यां निवेश्य यत्नेन ज्वालयेन्मृदुनानलम् ।
प्रस्थमात्रं रसं सम्यक् जम्बीरस्य प्रयोजयेत् ।
संचूर्ण्य पञ्चकोलोत्थैः कषायैः साम्लवेतसैः ॥
भावनाः खलु दातव्याः पञ्चाशत् प्रमितास्तथा ।
भृष्टटङ्कणचूर्णेन तुल्येन सह मेलयेत् ॥
तदर्धं कृष्णलवणं सर्व्वतुल्यं मरीचकम् ।
सप्तधा भावयेत् पश्चात् चणकक्षारवारिणा ॥
ततः संशोष्य संपिष्य कूप्यास्तु जठरे क्षिपेत् ।
अत्यर्थं गुरुमांसानि गुरुभोज्यान्यनेकशः ॥
भक्षित्वा कण्ठपर्य्यन्तं चतुर्वल्लमितं रसम् ।
पट्वम्लतक्रसहितं पिबेत्तदनुपानतः ॥
क्षिप्रं तज्जीर्य्यते भुक्तं जायते दीपनं पुनः ।
रसः क्रव्यादनामायं प्रोक्तो मन्थानभैरवैः [1]॥

सिंहलक्षौणिपालस्य वहुमांसप्रियस्य च ।
दिष्टोग्रासंसमासाद्य भैरवानन्दयोगिना ॥

कुर्य्याद्दीपनमुद्धतञ्च पवनं दुष्टामयोच्छोषणम् ।
तुन्दस्थौल्यनिवर्हणं गदहरं शूलार्त्तिमूलापहम् ॥
गुल्मप्लीहविनाशनं लघुभुजां विध्वंसनं संसनम् ।
वातग्रन्थिमहोदरापहरणं क्रव्यादनामा रसः ॥

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[1] This formula is ascribed to Manthāna Bhairavá, one of the noted Indian alchemists. It is wrongly referred to Śiva.

38. SAÑKARA LAUHA.

शङ्करप्रणीतं लौहम् ।

प्रणम्य शङ्करं रुद्रं दण्डपाणिं महेश्वरम् ।
जीवितारोग्यमन्विच्छन्नारदोऽपृच्छदीश्वरम् ॥
सुखोपायेन हे नाथ ! शस्त्रक्षाराग्निभिर्व्विना ।
चिकित्सामर्शसां नृणां कारुण्यात्कर्त्तुमर्हसि ॥
नारदस्य वचः श्रुत्वा नराणां हितकाम्यया ।
अर्शसां नाशनं श्रेष्ठं भैषज्यं शङ्करोऽवदत् ॥
पारञ्च वज्रादिलौहानामादायान्यतमं शुभम् ।
कृत्वा निर्म्मलमादौ तु कुनट्या माक्षिकेण च ॥
पत्तूरमूलकल्केन लिम्पेद्रसयुतेन च ।
" कुनटी " मनःशिला । " माक्षिकं " सुवर्णमाक्षिकम् ।
" पत्तूरं " पटकार इति लोके । " रस " पारदः ।
वह्नौ निक्षिप्य विधिवत् साराङ्गारेण निर्द्दहेत् ।
ज्वाला च तस्य रोद्धव्या त्रिफलाया रसेन च । " सारः " काष्ठं ।
ततो विज्ञाय गलितं शङ्कुनोर्द्धं समुत्क्षिपेत् ।
त्रिफलाया रसे पूते तदाकृष्य तु निर्व्वपेत् ॥
न सम्यक् गालितं यत्तु तेनैव विधिना पुनः ।
ध्मातं निर्व्वापयेत्तस्मिँल्लोहं तत्त्रिफलारसे ॥
यल्लोहं न मृतं तत्र पाच्यं भूयोऽपि पूर्व्ववत् ।
मारणान्न मृतं यच्च तत् त्यक्तव्यमलोहवत् ॥
ततः संशोध्य विधिवच्चूर्णयेल्लौहभाजने ।
लौहं तत्र तथा यत्स्याद्दृषदा सूक्ष्मचूर्णितम् ॥
कृत्वा लौहमये पात्रे मृत्तिकालिप्तरन्ध्रके ।
रसैः पङ्कोपमं कृत्वा तं पचेद् गोमयाग्निना ॥
पुटानि क्रमशो दद्यात् पृथग्भिर्व्विधानतः ।
त्रिफलार्द्रकभृङ्गाणां केशराजस्य बुद्धिमान् ॥

मानकन्दक भल्लात वह्नीनां शूरणस्य च ।
हस्तिकर्णपलाशस्य कुलिशस्य तथैव च ॥
“भृङ्गः” भेङ्गरिया। “केशराजः” केशराग इति ।
पुटे पुटे चूर्णयित्वा लौहात् षोड़शिकं पलम् ।
तन्मात्रं त्रिफलायाश्च पलेनाधिकमाहरेत् ।
अष्टभागावशेषे तु रसे तस्याः पचेद् बुधः ॥
अष्टौ पलानि दत्त्वा च सर्पिषो लौहभाजने ।
ताम्रे वा लौहदर्व्व्या तु चालयेद्विधिपूर्व्वकम् ॥
ततः पाकविधानज्ञश्चेष्टोद्देश्च सर्पिषि ।
मृदुमध्यादिभेदेन गृह्णीयात् पाकमादतः ॥
आरम्भे तद्विधानज्ञः कृतकौतुकमङ्गलः ।
भ्रामरं घृतसंयुक्तं विलिह्याद्रत्तिकाक्रमात् ।
द्वादशरत्तिकापर्य्यन्तं यथाग्निबलं खादेत् ॥
वर्द्धमानानुपानञ्च गव्यक्षीरेण संयुतम् ।
गव्याभावे त्वजायाश्च स्निग्धपथ्यादिभोजनम् ॥
सद्यो वह्निकरञ्चैव भस्मकञ्च नियच्छति ।
हन्ति वातं तथा पित्तं कुष्ठानि विषमज्वरम् ।
गुल्माग्निपाण्डुरोगांश्च निद्रालस्यमरोचकम् ।
शूलञ्च परिणामञ्च प्रमेहमववाहुकम् ।
श्वयथुं रुधिरस्रावं दुर्नामानं विशेषतः ।
बलकृद्बृंहणञ्चैव कान्तिदं स्वरबोधनम् ।
शरीरलाघवकरमारोग्यं पुष्टिवर्द्धनम् ।
आयुष्यं श्रीकरञ्चैव बलतेजस्करं शुभम् ॥
सस्त्रीकं पुत्त्रजननं वलीपलितनाशनम् ।
दुर्नामारिरयं नाम्ना दृष्टो वारसहस्रशः ॥
अनेनार्शांसि दह्यन्ते यथा तूलञ्च वह्निना ।

39. CANDRAPRABHĀ GUṬIKĀ.[1]

चन्द्रप्रभागुटिका ।

क्रिमिरिपुदहनव्योषत्रिफलामरदारुचव्यभूनिम्बाः ।
मागधीमूलं मुस्तं शटी वचा धातुमाक्षिकञ्चैव ।
लवणक्षारनिशायुक्स्तुम्बुरुगजकणासहातिविषाः ।
कर्षांशिकान्येव समानि कुर्य्यात् पलाष्टकञ्चाश्मजतु प्रदद्यात् ।
निःपञ्चशुद्धस्य पुरस्य धीमान् पलद्वयं लोहरजस्तथैव ।
सिताचतुष्कं पलमत वा स्यात् निकुम्भ कुम्भ तिसुगन्धियुक्ताम् ।
पृथक्पलं चूर्णमथावपेच्च चन्द्रप्रभेयं गुटिका विधेया ।
ज्वरातिसारग्रहणीविकारश्चार्शांसि निर्नाशयते षड़ेव ।
भगन्दरान् कामलपाण्डुरोगान् निर्नष्टवह्नेः कुरुते च दीप्तिम् ।
हन्त्यामयान् पित्तकफानिलोत्थान् नाड़ीगते मर्म्मगते व्रणे च ।
क्षतक्षये गृध्रसि यक्ष्मरोगे मेहे गजाख्ये प्रबले प्रयोज्या ।
शुक्रक्षये चाश्मरीमूत्रकृच्छ्रे शुक्रप्रवाहेऽपुप्रदरामये च ।
शम्भुं समभ्यर्च्य कृतप्रसादं प्राप्ता गुटी चन्द्रमसा प्रशस्ता ।
न पानभोज्ये परिहारवादी नशीतवातातपसेवनेषु ।
भक्तस्य पूर्व्वं सततं प्रयोज्या तक्रानुपानाप्यथमस्तु पाना ।
अजारसो जाङ्गलजीरसो वा पयोऽथवा शीतजलानुपानम् ।
शुक्रदोषान्निहन्त्यष्टौ प्रमेहांश्चापि विंशतिम् ।
वलिपलितनिर्मुक्तो वृद्धोऽपि तरुणायते ॥
गिरीजतुगुग्गुलुलौहान्येकीकृत्याथ भावयेद्वहुशः ।
क्वाथैस्तद्राधिहरैस्तदनु च चूर्णीकृतं मिलितम् ।
क्रिमिरिपुादिकचूर्णैर्गिरिजतुसमप्रधान्यपटोलयूषेण ॥

इति चन्द्रप्रभागुटिका ।

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[1] This formula is the same as the formula No. 33, Candraprabhā Guḍikā, p. 58.

40. MAHĀ BHALLĀTAKA AVALEHA.

महाभल्लातकावलेहः ।

निम्बगोपारुणा कट्वी त्रायन्ती त्रिफला घनं ।
पर्पटावल्गुजानन्तावचाखदिरचन्दनम् ।
पाठाशुण्ठीशटीभार्गीवासाभूनिम्बवत्सकम् ।
श्यामेन्द्रवारुणी मूर्व्वाविड़ङ्गेन्द्रयवानलम् ।
हस्तिकर्णामृताद्रिकापटोलरजनीद्वयम् ।
कणारग्वधसप्ताह्व तङ्कदेवीचटाफलम् ;
मञ्जिष्ठा लाङ्गलीरास्नानक्तमालंपुनर्नवा ।
दन्तीवीजकसारञ्च भृङ्गराजं कुरण्टकम् ।
अङ्कोटकञ्च शाखोटं द्विपलांशं पृथक् पृथक् ।
गृह्णीयात्तानि सर्व्वानि जलद्रोणे पचेच्छनैः ।
अष्टमांशावशेषन्तु कषायमवतारयेत् ।
विधाय वाससा पूतं स्थापयेद्भाजने दृढ़े ।
भल्लातकसहस्राणि छित्वा तु चार्म्मणेऽम्भसि ।
पचेदष्टावशेषं तत्कषायमवतारयेत् ।
गुड़ं शतपलं दत्त्वा लेहवत्तत्पचेच्छनैः ।
त्रिकटु त्रिफला मुस्तं विड़ङ्गं चित्रकं तथा ।
सैन्धवं चन्दनं कुष्ठं दीप्यकं च पलं पृथक् ।
सौगन्ध्यार्थं क्षिपेत् तत्र चातुर्ज्जातं पलं पलम् ।
महाभल्लातको ह्येष महादेवेन भाषितः ।
प्राणिनां हितकामेन जयेच्छीघ्रं प्रयोजितः ।
श्वित्रमौडुम्बरं दद्रूमृचजिह्वन्तु काकणम् ।
पुण्डरीकं सचर्म्माख्यं विस्फोटं रक्तमण्डलम् ।
कण्डूकापालकं कुष्टं पामानञ्च विपादिकाम् ।
वातरक्तं षड़र्शांसि पाण्डुरोगव्रणान्क्रिमीन् ।
रक्तपित्तमुदावर्त्तं कासं श्वासं भगन्दरम् ।
सप्ताभ्यासेन पलितमासवालं सुदुस्तरम् ।

निर्यन्त्रणस्तु कथितौ विहाराहारमैथुने ।
कुरुते परमं कान्तिं प्रदीप्तं जठरानलम् ।
अनुपानं प्रयोक्तव्यं छिन्नातोयं पयोऽथवा ।
भोजने तु सदा त्याज्यमुष्णमम्लं विशेषतः ।

41. RASÂLĀ.

रसाला

सत्वं गुडूच्या गगनं सलोहमेलासितामागधिकासमेतम् ।
एतत् समेतं मधुनावलीढं रामाशतं सेवयतीव षण्ढः ॥
गवां विरूढवत्सानां सिद्धं पयसि पायसम् ।
गोधूमचूर्णञ्च यथा सितामधुघृतान्वितम् ।
भुक्त्वा हृष्यति जीर्णोऽपि दशदारान् व्रजत्यपि ॥
दध्नोऽर्द्धाढकमीषदम्लमधुरं खण्डस्य चन्द्रद्युतेः
प्रस्थं क्षौद्रपलम्पलञ्च हविषः शुण्ठ्याश्च माषाष्टकम्
तद्वन्माषचतुष्टयं मरिचतः कर्षं लवङ्गन्तथा
घृत्वा शुक्लपटे शनैः करतलैर्नीत्वाऽस्य विस्रावयेत् ॥
मृद्भाण्डे मृगनाभिचन्दनरसस्पृष्टेऽगुरुधूपिते
कर्पूरेण सुगन्धितं तदखिलं संलोड्य संस्थापयेत् ।
स्वस्यार्थे मकरेश्वरेण रचिता ह्येषा रसाला स्वयम्
भोक्तुर्म्मन्मथदीपनी सुखकरी कान्तेव नित्यं प्रिया ॥

42. SIMHAṆĀDA GUGGULU.

सिंहनादगुग्गुलुः ।

पलत्रयं कषायस्य त्रिफलायाः सुचूर्णितम् ।
सौगन्धिकपलञ्चैकं कौशिकस्य पलं तथा ॥
कुडवं चित्रतैलस्य सर्व्वमादाय यत्नतः ।
पाचयेत् पाकविधिज्ञः पात्रे लौहमयी दृढे ॥

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हन्ति वातं तथा पित्तं श्लेष्माणं खञ्जपङ्गुताम् ।
श्वासं सुदुर्ज्जयं हन्ति कासं पञ्चविधं तथा ॥
कुष्ठानि वातरक्तानि गुल्मशूलोदराणि च ।
आमवातं जयेदेतदपि वैद्यविवर्ज्जितम् ॥
एतदभ्यासयोगेन जरापलितनाशनम् ।
सर्पिस्तैलरसोपेतमश्नीयाच्छालिषष्टिकम् ॥
सिंहनाद इति ख्यातो रोगवारणदर्पहा ।
वह्निवृद्धिकरः पुंसां भाषितो दण्डपाणिना ॥

43. Formula to cure Śvitra.

श्वेतजयन्तीमूलं पिष्टं पीतञ्च गव्यपयसैव ।
श्वित्रं निहन्ति नियतं रविवारे वैद्यनाथाज्ञा ॥

44. Kusumbhādya Taila.

कुसुम्भाद्यं तैलम् ।

कुसुम्भकुङ्कुमोशीरमञ्जिष्ठारक्तचन्दनैः ।
सिक्थसर्जरसातङ्कगुडूचीसैन्धवाम्बुदैः ॥
मूर्वाशतावरीलाक्षामधुकैश्च पलांशकैः ।
चतुर्गुणेन पयसा पचेत्तैलाढकं भिषक् ॥
अर्दितं कर्णशूलं च शिरःशूलं च दारुणम् ।
गृध्रसीं वातरक्तं च पक्षाघातं व्यपोहति ॥
तद्वस्तिषु च पानेषु नस्ये च कर्णपूरणे ।
अभ्यङ्गे च शिरोरोगे तैलं विद्याद्यथाऽमृतम् ॥
पाणिपादांसदाहेषु गुदयोनिरुजासु च ।
सुप्तिवातेऽस्थिभग्ने च देवदेवेन पूजितम् ॥

45. VṚHAT SIVA GUṬIKĀ.[1]

बृहच्छिवगुटिका ।

काले रवितापाढ्ये कृष्णायसे शिलाजतुप्रवरम् ।
त्रिफलारससंयुक्तं त्र्यहं विशुद्धं पुनः शुष्कम् ॥
दशमूलस्य गुडुच्या रसे वलायास्तथा पटोलस्य ।
मधुकरसे गोमूत्रे प्रहरं भावयेत्क्रमश एकाहम् ॥
क्षीरेण तु तत्परतो भावयित्वा गवां पुनः शुष्कम् ।
सप्ताहं भाव्यं स्यात्क्वाथैरेषां यथालाभम् ॥
काकोल्यौ द्वे मेदे विदारि युग्मं शतावरी द्राक्षा ।
ऋद्धियुगर्षभवीरामुण्डीतिकाजीरकांशुमत्यश्च ॥
रास्नापुष्करचित्रकदन्तीभकणाकलिङ्गचव्याब्दाः ।
कटुका शृङ्गी पाठा चेति पलांशानि कार्याणि ॥
अब्द्रोणसाधितानां रसेन पादांशकेन भाव्यानि ।
गिरिजस्यैव भावितशुद्धस्य पलानि दश षट् च ॥
द्विपलं च विश्वधात्रीमागधिकाकर्पटाख्यमरिचानाम् ।
चूर्णपलं च विदार्या तालीसपलानि चत्वारि ॥
षोडश सितापलानि तु चत्वारि घृतस्य माक्षिकस्याष्टौ ।
तिलतैलस्य द्विपलं चूर्णस्य पलानि पञ्च पञ्चानाम् ॥
त्वक्क्षीरिपत्रलवङ्गैलानां च मिश्रयित्वा तु ।
गिरिजस्य षोडशपलैर्गुटिकाः कार्यास्ततोऽक्षसमाः ॥
ताः शुष्काः नवकुम्भे जातीपुष्पाधिवासिते स्थाप्याः ।
तासामेका काले भक्ष्या पेयापि वा सततम् ॥
क्षीररसदाडिमरसाः सुरासवा हिमकरशिशिरतोयानि ।
आलोडनाय तासामनुपाने वा प्रशस्यन्ते ।
जीर्णे लघ्वन्नपयोजाङ्गलनिर्यूहयूषभोजी स्यात् ।
सप्ताहं भोजनमेवमतः परं भवेत्सर्वसामान्यम् ।

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[1] This formula is the same as the formula No. 36, Śiva Guṭikā, p. 61.

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भुक्त्वाऽपि भक्षितेयं यदृच्छया नावहेद्भयं किंचित् ।
निरुपद्रवा प्रयुक्ता सुकुमारैः कामिभिश्चैव ॥
संवत्सरं प्रयुक्ता हन्त्येषा वातशोणितं प्रबलम् ।
बहुवार्षिकमपि गाढं यक्ष्माणं चाढ्यवातं च ॥
ज्वरयोनिशुक्रदोषान् प्लीहार्शःपाण्डुहृद्ग्रहणीरोगान् ।
वर्ध्मं वमिगुल्मपीनसहिक्काश्वासारुचिकासान् ॥
जठरं श्वित्रं कुष्ठं षाण्ढ्यं क्लैब्यं क्षयं मदं शोषम् ।
उन्मादापस्मारौ वदनाक्षिशिरोगतान्रोगान् ॥
आनाहमतीसारमसृग्दरकामलां प्रमेहांश्च ।
गलगण्डापच्यर्बुदविद्रधिभगन्दरं रक्तपित्तं च ।
अतिकार्श्यमतिस्थौल्यं स्वेदमपि श्लीपदं च विनिहन्ति ।
दंष्ट्राविषमतिभीमं गरलानि बहुप्रकाराणि ॥
मन्त्रौषधिप्रयुक्तानरियुक्तान् कौलिकांस्तथा सर्पान् ।
पापमलक्ष्मीं चेयं शमयेद्गुटिका शिवा नाम ॥

वन्ध्या वृष्या धन्या कान्तियशःश्रीप्रजाकरी चेयम् ।
दद्यान्नृपवल्लभतां जयं विवादे सुखस्था च ॥
श्रीमान्प्रकृष्टमेधास्मृतिबुद्धिबलान्वितो दृढशरीरः ।
पुष्टयोजोवर्णेन्द्रियतेजोबलसंपदीपितः ॥
वलीपलितरोगरहितो जीवेच्छरदां शतद्वयं पुरुषः ।
संवत्सरप्रयोगात् , द्वाभ्यां शतानि चत्वारि ॥
सर्वामयजिन्महितं मुनिभिर्भक्त्या रसायनवरिष्ठम् ।
शिवगुटिकेति प्रथितमुक्तं गिरिशेन गणपतये ॥

46. Vyoṣādyā Guṭikā.

व्योषाद्या गुटिका ।

व्योषं सग्रन्थिकं पथ्यां चित्रकं जीरकद्वयम् ।
अजमोदां यवानीं च वचां चैवमवल्गुजम् ॥
लवणत्रितयं क्षारं समभागानि चूर्णयेत् ।
यावन्त्येतानि द्रव्याणि तावन्तं गुग्गुलुं शुभम् ॥

पलार्धसंमितं चात्र योजयेच्चाम्लवेतसम् ।
गुटिकैषा हिता वाते सामे सन्ध्यस्थिमज्जगे ॥
नवं करोति भग्नं च जठरानलदीपन् ।
पूजिता देवदेवेन कालपादेन शम्भुना ॥

47. VRIHAT SĀYAMBHUVA GUGGULU.

वृहत्स्वायम्भुवगुग्गुलुः ।

अलम्बुषालोहचूर्णमनयोर्द्धे पले पले ।
पलत्रयं च ताप्युत्थाद्वाकुची पलपञ्चकम् ॥
शिलाजतु तयोस्तुल्यं पलानि दश गुग्गुलोः ।
सर्वाण्येकत्र संचूर्ण्य गुटिकां कारयेद्बुधः ॥
शाणं कर्षार्धकर्षं वा ततः खादेत्प्रयत्नतः ।
वातरक्तं च कुष्ठानि श्वित्राणि विविधानि च ॥
भगन्दरान् क्षुद्ररोगानर्शांसि ग्रहणीगदान् ।
वस्तिजांश्छुक्रदोषांश्च पाण्डुतामुदराणि च ॥
शोफश्लीपदमानाहं यक्ष्माणं च विशेषतः ।
नाडीव्रणांश्च सर्वांस्तु हन्याद्विद्रधिहृद्गदान् ॥
वृष्यो बल्यश्च धन्यश्च केश्यो मेधाग्निवर्धनः ।
आयुर्वर्णकरस्त्वच्यः पुत्रसौभाग्यदस्तथा ॥
गर्भसन्धानकृत्प्रोक्तो गर्भपुष्टिकरः परम् ।
कालपादेन विख्यातो नाम्ना स्वायंभुवो भुवि ।

48. KUMARYĀSAVA.

कुमार्यासवः ।

द्रोणमानं कुमार्यास्तु रसं भाण्डे निधापयेत् ।
तुलार्धं दशमूलं तु तदर्धं पौष्करी जटा ॥
तत्समं धन्वयासं च चित्रार्धं च परिक्षिपेत् ।
प्रस्थार्धममृता ज्ञेया तदर्धमभया तथा ॥

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लोध्रकामलकं पथ्यं मञ्जिष्ठा च कलिद्रुमः ।
चव्यं च कुष्ठमधुकं कपित्थं सुरदारुकम् ॥
कृमिशत्रुर्मागधिका भार्गी स्यादष्टवर्गकम् ।
जीरकं क्रमुको रास्ना शठी रेणुकमेव च ॥
शृङ्गी निशा प्रियङ्गुश्च मांसी मुस्ता च सारिवा ।
वासा वरी शुक्रवीजं नागकेसरमेव च ॥
पुनर्नवा समांशानि षड्भिर्द्रोणैर्जलस्य तु ।
क्वाथयेदनया रीत्या चतुर्थांशं जलं नयेत् ॥
त्रिंशत्पला च मृद्वीका दन्तसंख्यापलं मधु ।
गुडस्तुलाचतुष्कं च तदर्धा धातकी भवेत् ॥
पलद्वयं लवङ्गानि कङ्कोलं मलयोद्भवम् ।
चातुर्जातं तथा कृष्णा मरिचं जातिपत्रकम् ॥
आकल्लकं जातिफलं कपिकच्छुश्च दीप्यकम् ।
वचा खदिरसारश्च दहनं जीरकं तथा ।
यवानी वालकं विश्वा मुस्ता धान्यं हरीतकी ।
हपुषा तिन्तिडीकं च चूर्णमेषां प्रयोजयेत् ॥
भाण्डे पुराणे सुस्निग्धे धूपिते गन्धभेषजैः ।
कोष्ठसारे तथा तप्ते भूमौ मासं विनिक्षिपेत् ॥
यो रोगी प्रातरुत्थाय पलमेकं तु भक्षयेत् ।
धातुक्षयं जयेत्कासं श्वासं पञ्चविधं तथा ॥
अर्शांसि वातरोगांश्च ग्रहणीपाण्डुकामलाः ।
हलीमकमुदावर्तं गुल्मं पञ्चविधं जयेत् ॥
आध्मानं कुक्षिशूलं च प्रत्याध्मानं गुदग्रहम् ।
अष्ठीलिकां च हृद्रोगानेतान् व्याधीन्विनिर्जयेत् ॥
कुमार्यासव इत्येष कथितः शूलपाणिना ।

49. NĀLIKERĀSAVA.

नालिकेरासवः ।

नालिकेरोदकं चैव द्रोणमात्रं प्रदापयेत् ।
इक्षो रसस्य द्रोणार्धं शाल्मल्या रसप्रस्थकम् ॥

दशमूलरसस्यापि प्रस्थमात्रं तथैव च ।
घृतभाण्डे विनिक्षिप्य मध्ये चूर्णं निवेशयेत् ॥
चातुर्जातकधातक्योः पलान् षोड़शसंख्यया ।
शाणमात्रा तु कस्तुरी केशरं तगरं तथा ॥
चन्दनं देवपुष्पं च पलमात्रं पृथक् पृथक् ।
मासादूर्ध्वं पिबेत्तासुं रूपे कामसमो भवेत् ॥
वृद्धोऽपि तरुणीं गच्छेत् षण्ढोऽपि पुरुषायते ।
वलीपलितसंत्यक्तः शतायुश्चभवेन्नरः ॥
नालिकेरासवः प्रोक्तः शम्भुना परमेष्ठिना ।

50. VṚHAT SAHACARA TAILA.

बृहत्सहचरतैलम् ।

क्वाथे साहचरे शतावरियुते क्षुद्राम्लतैरण्डजे
श्योनाकारणिबिल्वगोक्षुरयुते सिंहाग्निमन्थोद्भवे ।
रास्नोशीरविशालदारुतगरैस्त्वक्पत्रमेदानखैः
स्पृक्काशैलघनैलवालुसरलैः कङ्कोलकुष्ठोत्पलैः ॥
कौन्तीकेशीवलाद्रिसारिवनिशाश्यामाशताह्वानतै-
र्मञ्जिष्ठापुरसिक्थचन्दनवरैश्चण्डाह्वस्थौणेयकैः ।
श्रीवेष्टागरुरोध्रकुङ्कुमवरैः कल्कैः समांशैरिमै-
स्तैलं क्षीरसमं विपाच्य विधिना वस्तौ च नस्ये ध्रुवम् ॥
पानाभ्यङ्गविधौ नियोजितमिदं वातादिसर्वामयान्
गुल्माष्ठीलशिरोर्तिशूलमुदरं श्वासामकासज्वरम् ।
शोफं प्लीहगुदामयं च जठरं धातुक्षयाध्मानकं
अर्शःकुष्ठभगन्दरं च समयेत्सर्वान् व्रणान् हन्ति च ॥
जयति पवनरोगान् कामलां विड्विबन्धं
दिननिशितिमिरान्ध्यं गृध्रसीं मूर्ध्निवातम् ।
सहचरमिति नाम्ना तैलमेतत्प्रसिद्धं
धनपतिनृपयोग्यं भाषितं शम्भुनैव ॥

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51. VIJOYĀ GUTIKĀ.

विजयागुटिका ।

पलत्रयं हरीतक्याश्चित्रकस्य तथैव तु ।
एलात्वकपत्रमुस्तानां भागोऽर्धपलिकः स्मृतः ॥
व्योषं पिप्पलिमूलं च विषं च पलमात्रकम् ।
नागकेसरचूर्णं तु कर्षं दद्याद्विचक्षणः ॥
रेणुकार्धपलं चात्र रसस्य कर्षमेव च ।
एतत्संभृत्य संभारं सूक्ष्मचूर्णं तु कारयेत् ॥
गुडस्यार्धतुलां दत्त्वादर्व्या सम्यग्विघट्टयेत् ।
ततस्तु गुटिकाः कृत्वा तस्मात्षष्टिशतत्रयम् ॥
एकैकां भक्षयेत्प्रातः कृताहारो यथाबलम् ।
मासेन पलितं हन्ति करोत्यग्निं द्वितीयके ॥
शुक्रवृद्धिं तृतीये तु बलवर्णप्रसादनम् ।
हन्त्यष्टादश कुष्ठानि सप्त चैव महाक्षयान् ॥
प्लीहानं श्वासकासौ च अन्त्रवृद्धिमरोचकम् ।
अशीतिं वातजान्रोगान्मूत्रकृच्छ्रं भगन्दरम् ॥
प्रमेहान्विंशतिं चैव तथाऽर्शांसि गलग्रहम् ।
सर्पलुताविषं हन्ति सर्वं स्थावरजङ्गमम् ॥
योनिदोषमपस्मारमुन्मादं विषमज्वरम् ।
बलेन गजतुल्योऽसौ वेगेन तुरगोपमः ॥
मायूरस्तु भवेदग्निर्वाराहश्रोत एव च ।
चटकः स्त्रीविलासेन गृध्रदृष्टिश्च जायते ॥
उपयोगात्परं जीवेन्नरो वर्षशतत्रयम् ।
न चान्ने परिहारोऽस्ति न चाध्वनि न मैथुने ॥
ग्राम्यधर्मं च कुर्वाणो भोजनं च यथेच्छया ।
विजया नाम गुटिका विख्याता रुद्रभाषिता ।
भक्षयन्ति नरा ये तु तेषां सिद्धिर्न संशयः ॥

52. KAULITIKĀ VARTI.

कौलीतिका वर्तिः ।

पलानि विंशतिं दार्व्या मूलतः संप्रकल्पयेत् ।
जले च षोड़शगुणे रात्रिमेकां निधापयेत् ॥
मृदावग्नौ क्वाथयेत चतुर्थांशावशेषितम् ।
निःस्राव्य क्वाथयेद्भूयस्त्वजाक्षीरेण संयुतम् ॥
पादिकेन भिषग्दद्यादवलेहत्वमागतम् ।
अप्रदग्धं तु तं कल्कं छायायां परिशोषयेत् ॥
कौलीतिका वर्तिरियं सर्वनेत्ररुजापहा ।
सर्वाभिष्यन्दशमनी स्वयं प्रोक्ता पिनाकिना ॥

53. SŪTA BHASMA.

सूतभस्म ।

सूतं सुशुद्धं लवणैश्चतुर्भिः क्षारैस्त्रिभिश्चापि विमर्दयेच्च ॥
संशोष्य पश्चादपि हिङ्गुराजिकाशुण्ठीभिरेभिश्च समं विमर्द्य वै ।
रसेन सार्धं हि कुमारिकाया मूषां विदध्याद्रविघर्मशोषिताम् ॥
तस्यां निधायाथ रसस्य गोलकं तं स्वेदितं चाम्लरसेन सम्यक् ।
यामाष्टकेनाग्निकृतेन दोलया पश्चाद्रसेनाभिविमर्दितोऽसौ ॥
भेकपर्णु कटुभृङ्गराजकैः शृङ्गवेरगिरिकर्णिकारसैः ।
काकमाचीरसविभक्ति काजलैर्धूर्तजैरपि जयन्तिकाद्रवैः ॥
सिन्धुवारकरसेन विमर्दितं मसृणखल्लतले विवासरम् ।
प्रतिरसं च विशोष्य हि भक्षयेद्गुञ्जिकाद्वयमितं रुजापहम् ॥
केकिमाहिषवराहपित्तकैः कच्छपस्य च रसेन मर्दितम् ।
जायतेऽधिकतरं गुणेन वै सन्निपातभवमूर्च्छनं जयेत् ॥
यः श्रीसूतवरस्य सेवनमिदं नित्यं करोतीह वै
दीर्घायुर्धनधान्ययशःसहितः प्राप्नोति सौख्यं सदा ।
लोके कीर्तिपरंपरां वितनुते धर्मे मतिर्जायते
प्रान्ते तस्य परा गतिर्हि नियतं सत्यं शिवेनोदितम् ॥

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54. GANDHAKA TAILA PĀTANA.

गन्धकतैलपातनम् ।

कलांशत्र्योषसंयुक्तं शुद्धगन्धकचूर्णकम् ॥
वस्त्रे वितस्तिमात्रे तु गन्धचूर्णं सतैलकम् ।
विक्षिप्य वेष्टयित्वा च वर्तिं सूत्रेण वेष्टयेत् ॥
धृत्वा संदशतो वर्तिमध्यं पज्वालयेच्च ताम् ।
विद्रुतः पतते गन्धो विन्दुशः काचभाजने ॥
तां द्रुतिं प्रक्षिपेत्पत्रे नागवल्ल्यास्त्रिविन्दुकाम् ।
रसं वल्लमितं तत्र दत्त्वाऽङ्गुल्या विमर्दयेत् ॥
तत्सर्वं भक्षयेत्पश्चाद्गोदुग्धं चानु संपिवेत् ।
कामस्य दीप्तिं कुरुते क्षयपाण्डुविनाशनम् ॥
ग्रहणीं नाशयेद्दुष्टां शूलार्तिश्वासकासकम् ।
आमाजीर्णं प्रशमयेल्लघुत्वं च पजायते ॥
गन्धकस्य गुणान् वक्तुं शक्तः कः शम्भुना विना ।

55. VĀTANĀŚANA RASA.

वातनाशनो रसः ।

सूतं स्वर्णं ताम्रकं वज्रमेव
　　लौहं ताप्यं तालकं तुल्यकं च ।
अभ्रं फेनं शुद्धसौवीरकं हि
　　कृत्वा सम्यक् सर्वमेवं समांशम् ॥
भागं चैकं कारयेद्वै रसोनं
　　वज्रक्षीरैर्मर्दितं तद्दिनैकम् ।
रुद्ध्वा सम्यग्भूधरे तं विपाच्य
　　माषं चैकं भक्षयेदार्द्रकेण ॥
लिह्यादेवं पिप्पलीमाक्षिकेण
　　कृष्णामूलक्वाथ अत्रानुपेयः ।
सर्वान् वातान् वातजान्वै विकारान्
　　हन्यात्सत्यं भाषितं भैरवेण ॥

56. TĀLAKARĀJA RASA.

तालकराजरसः ।

वङ्गं चाभ्रं शोधितं तालकं हि सूतं शुद्धं वत्सनाभं तथैव ।
सौवीरं चेट्टङ्कणं चैव व्योषं वङ्गं युग्मं भागमतेव कुर्यात् ॥
अभ्रं कुर्यात्त्रीणि भागानि सम्यक् सूतं चैकं तालकं वै त्रिभागम् ।
नागं चैकं टङ्कणं वेदभागं सौवीराद्दौ कल्पनीयौ हि भागौ ॥
खल्वे मर्द्यं सर्वमेकत्र वज्रिक्षीरैः चार्कैः वासरैकं प्रयत्नात् ।
पश्चात्क्षेप्यं काचकूप्यां हि सर्वं कूपीवक्त्रं ताम्रपत्रेण रुन्ध्यात् ॥
मुद्रां कृत्वा पाच्य यामाष्टयुग्मं शीतं कृत्वा पूर्ववन्मर्दनीयम् ।
एवं कुर्यात्त्रीणि वाराणि शुद्धं कल्कं जातं षोड़शांशेन ताम्रम् ॥
शुभ्रं कुर्यात्सर्वरोगप्रणाशं सत्यं चैतद्भाषितं भैरवेण ।
सेव्यं वल्लं वर्षमेतत्प्रयत्नाद्वृद्धत्वं नो जायते सर्वकालम् ॥

57. SVARṆA SINDURA.

स्वर्णसिन्दूरम् ।

श्लक्ष्णपत्रं सुवर्णस्य सुशुद्धं कोलसम्मितं ।
शुद्धसूतं पलैकेन मेलयेत् यत्नतो भिषक् ।
सार्द्धपलं गन्धकञ्च कृत्वा कज्जलिकां ततः ।
निवेश्यकाचकूप्याञ्च दृढायां परिवेष्टयेत् ।
तां कर्पटैर्मृदा चैव खटिकाभिः समन्ततः ।
निरुध्यसम्यक् यत्नं न संपृज्येशं सहीमया ।
वालुका-यन्त्रमध्ये तां सन्निरुध्य समाहितः ।
पचेद्द्वादश यामांस्तु निर्व्वाते च सुनिर्ज्जने ।
एकाकी पाकविद्वैद्यः स्वाङ्गशीतं समुद्धरेत् ।
स्वर्णसिन्दूरमित्येतत् सर्व्वरोग निसूदनं ।
वातिकं पैत्तिकञ्चैव श्लैष्मिकञ्च सुदारुणं ।
रोगं सर्व्वं निहन्त्याशु भक्षणान्नात्र संशयः ।
बलायुर्व्वर्द्धनं सम्यक् वलीपलित नाशनं ।

अश्मरी-सूतिका-मेह गर्भिणीरोगनाशनं ।
सर्व्वलोक हितार्थाय स्वयंप्रोक्तं पिनाकिना ॥

58. PURṆA CANDRA RASA.

पुर्णचन्द्रो रसः ।

शुद्धाभ्ररूप्यलौहानि कर्षमात्राणि चूर्णयेत् ।
सुवर्णं ताप्यकं वङ्गं जीरकद्वय पादिकं ॥
लवङ्ग मुस्तकञ्चैव तथा त्रिफलमेव च ।
एतच्चूर्णीकृतं सर्व्वं धात्री स्वरस मर्द्दितं ॥
भावयेत् सर्व्व चूर्णानि शतावर्य्या रसैस्तथा ।
द्विगुञ्जा फल मानेन वटीं कार्य्या विचक्षणैः ।
अनुपान प्रभेदेन रोगे योगं प्रकल्पयेत् ।
नित्यं स्त्री सेवनाद्द यस्तु क्षीण शुक्री भवेन्नरः ॥
महाबली महावीर्य्यो जायते नात्र संशयः ।
नाशयेत् प्रबलान् रोगान् प्रमेहां श्चापि विंशति ।
रावणस्य हितार्थाय ह्यकरोच्छङ्करः पुरा ॥
पूर्णचन्द्रो रसो नाम सर्व्व रोगेषु दुर्लभः ॥

59. BHASMEŚVARA RASA.

भस्मेश्वररसः ।

एकभागं वत्सनाभं त्रिभागं म(रि)चान्वितम् ।
भस्म षोडशभागं च काननोत्पलसम्भवम् ॥
सूक्ष्मचूर्णं कृतं सर्व्वं नस्यं स्यात्सन्निपातनुत् ।
अयं भस्मेश्वरो नाम शम्भुना परिकल्पितम् ॥

60. ŚĪTABHANJĪ RASA.

शीतभञ्जीरसः ।

पारदं रसकं तालं तुल्यं गन्धकटङ्कणम् ।
सर्वमेतत्समं शुद्धं कारवेल्ला रसैर्दिनम् ॥

मर्दयेत्तेन दिनाच्च ताम्रपात्रोदरं घनम् ।
अङ्गुलार्धार्धमानेन तत् पचेत्सिकताह्वये ॥
यत्नं यावत्स्फुटन्त्येव व्रीहयस्तस्य पृष्ठतः ।
ततः सुशीतलं ग्राह्यस्ताम्रपात्रोदराद्बुधैः ॥
तत्समं मरिचं दत्त्वा सर्वमेकत्र चूर्णयेत् ।
द्विगुञ्जं पर्णखण्डेन वातिके पैत्तिके ज्वरे ॥
गुञ्जैकं ससितं दद्यात्त्रिगुञ्जं व्योषयुक्कफे ।
सन्निपाते ज्वरे देयो वल्लैकमार्द्रकद्रवैः ॥
त्रिदिनैर्विषमं तीव्रमेकद्वित्रिचतुर्थकम् ।
नाशयेच्छीतभञ्जाख्यो रसो रुद्रेण निर्मितः ॥

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61. PUTRAPRADA RASA.

पुत्रप्रदो रसः ।

शुद्धसूतं त्र्यहं स्वेद्यं मन्दाग्नौ दध्नि माहिषे ।
त्रुटिते त्रुटिते दद्याद्दधि तुर्येऽह्नि चोद्धरेत् ॥
तस्मिन् स्वर्णं क्षिपेत्प्राज्ञश्चतुःषष्टितमांशकम् ।
मर्दयेन्निम्बुनीरेण यावतैक्यं हि जायते ॥
पुनः संस्वेद्य तं सूतं वटशुङ्गाहिवल्लिजैः ।
काकमाच्या च जीवन्त्या रसः स्याद्यामयुग्मकात् ॥
दिनं शीताम्बुकुम्भस्थं दिनैकं दध्नि माहिषे ।
एवं सिद्धरसाद्गुञ्जं प्रत्यहं ब्रह्मचर्यधृक् ॥
मासैकं सेवते भर्ता सितादुग्धौदनप्रियः ।
त्रिफलानिम्बकार्पासीरसैर्नारी क्रमात्पृथक् ॥
सप्त सप्त दिनान् पीत्वा पश्चादृतुसमागमे ।
रसं वल्लं त्र्यहं चैकं कार्पास्यम्बु सितायुतम् ॥
टङ्कणं तुरिका सूतं पक्वाम्लिकरसान्वितम् ।
त्रिदिनं मधुना योनेर्लेपं शुद्धिकरं परम् ॥
महिष्या दधिमध्यस्थं दिवा सूतं त्रिमाषकम् ।
स्त्रीसेवासमये रात्रौ भक्षयेद्दधिसंयुतम् ॥

संभोगान्ते तथा स्थैर्यं यामार्धं संपुटेन च
सर्व्वलक्षणसंपन्नं सुतं जनयते वरम् ॥
तापादिके समुत्पन्ने देयं द्राक्षासितादिकम् ।
कार्यः शीतोपचारश्च युक्त्या भिषजा सदा ॥
आयुर्वृद्धिं बलं कान्तिं नष्टवीर्यविवर्धनम् ।
कुर्याद्रोगहरः पुत्रप्रदो रुद्रविनिर्मितः ॥

62. SARVVA VYĀDHIHARA.

सर्व्वव्याधिहरः ।

रसोपरसलोहानि धान्याभ्रादिविशेषतः ।
गन्धत्रययुतं सूतं मारयेत्पुटयोगतः ॥
पचेत्तं चक्रयन्त्रे च गन्धकेन समन्वितम् ।
विषं कलांशकं दत्त्वा दीपनौषधिभावितम् ॥
पित्तेशोपविषैर्भाव्यं वटी माषप्रमाणिका ।
ख्यातो रसेश्वरः सूतः सन्निपातविनाशनः ॥
भिषग्भिश्च प्रदातव्यं शीतस्नानं च रोगिणे ।
अगदः सर्पदष्टस्य मृतसंजीवनः परः ॥
क्रामणेन समायुक्तः सर्वव्याधिविनाशनः ।
नागवङ्गविषैर्युक्तं विना व्याधिं न सेवयेत् ।
सर्वव्याधिहरो नाम पुरा रुद्रेण भाषितः ॥

Serpent Worship.—The serpent worship existed almost in all countries in ancient times. It was especially prevalent in India, where even in the present day the cobra is held in great veneration. Its presence in a house is not always willingly disturbed and it is regarded by the inmates as the 'Vāstudeva' the god of the house. It is not killed by the Hindoos but is allowed to go elsewhere, if it proves dangerous to their safety. Śiva is represented as having snakes for his ornaments. Three snakes twine round his body, neck and head and are represented with their heads expanded. So snake is considered to be one of the symbols of Śiva now. The gods are often represented with a canopy of five or seven cobras over them in the old cave temples. Vāsuki, the King of snakes, holds the world over his thousand hoods; and hooded snakes are said to have shielded Nārāyaṇa by the canopy of their hoods when he lay floating on water before he created this world.

In Egypt the old papyrus records show that snakes, especially cobras, are associated with divinity and they symbolise wisdom. The great Sun-god, the giver of light, is represented as crowned with the double uræus, the two cobras supporting the sun's disc. In China the concretions of snakes find a prominent place as a therapeutic agent.

In the description of the arms of the Society of Apothecaries in "Burke's Encyclopædia of Heraldry," 1851, we find serpents in the right hand of Apollo: "In shield, Apollo, the inventor of physic, with his head radiant, holding in his left hand a bow, and in his right a serpent." In the figure of Æsculapius, reproduced in Wotton's Chronicles of Pharmacy from the Cassalius Collection of Medals, etc. (17th century) we find a snake encircling the god.

CHAPTER II

BHĀSKARA

In the Ṛgveda, the sun is celebrated under two different names, Sūrya and Savitri. Bhāskara or the Sun is also considered as the fountain-head of all knowledge in medicine. He is the father of the two Asvins. The idea that the Sun is a good physician, we can trace back to the Ṛgveda where he is invoked for curing diseases: The Sun is dispelling disease (i. 35. 9).

And again in i. 50. 11-13: "Oh Sun! Cure the sickness of my heart and yellow colour of my body." हृद्रोगं मम सूर्य्यं हरिमाणं च नाशय R.V. हृद्रोगं हृदयगतं आन्तरं रोगं हरिमाणं शरीरगतं कान्तिहरणशील बाह्यरोगं नाशय सूर्य्य—Sāyaṇa. Again "Cure is to be prayed from the Sun"—आरोग्यं भास्करादिच्छेद् —आप्तवाक्य। Sūrya is styled as the son of Dyaus (Rv. x. 37. 1) or Aditi (Rv. x. 88. 11; viii. 90. 11). Uṣā or the Dawn is said to be his wife (Rv. vii. 75. 5); but in Rv. vii. 78. 3, she is described as to have produced Sūrya, Yajña and Agni. He is described as golden-handed (i. 22. 5), golden-eyed (1. 35. 8), golden-tongued (vi. 71. 3), but he is yellow-haired (x. 139. 1). He moves on a golden-car, drawn by seven radiant horses (i. 115. 3, 4; vii. 60. 3; 63. 2; x. 37. 3; 49. 7). He beholds all creatures, bears testimony to the good and bad deeds of mortals (i. 50. 2, 7; vi. 51. 2, etc.), and pursues an ascending and descending path (i. 35. 2-5; vii. 45. 1), which is prepared by the Ādityas, Mitra, Aryaman and Varuṇa (i. 24. 8; vii. 60. 4; 87. 1). Puṣān is his messenger (vi. 58. 3). He is the soul of all things, stationary and moving (i. 115. 1). He vivifies men (vii. 63. 2). He is the eye of Mitra, Varuṇa and Agni

CSL

(i. 115. 1 ; vi. 51. 1 ; etc.). He upholds the sky (x. 85. 1). He is identified with Indra (viii. 82. 1, 4), Dhātri, Savitri, and Viṣṇu (x. 170. 4), and is said to be possessed of all divine attributes (viii. 60. 1).

In the Brahmāṇḍa Purāṇa the birth of Aśvin twins is thus described : The parents of Vivasvān (the Sun) were Kāsyapa and Dākṣāyaṇi. Viśvakarmā had a daughter, Saṅgā Devī by name. She became the wife of Vivasvān and was called Surenu for her exquisite beauty. The beautiful, young Surenu was however not satisfied with her husband for she found him too hot to approach. Still she became the mother of Vaivasvata Manu and the twins, Yamunā, a daughter, and Yama, a son. One day while in company with her lord, she felt the heat so unbearable, that she secretly gave life to her shadow which looked exactly like her own self and ordered her to remain with the Sun who should however be kept ignorant of the mystery—a promise only to be violated if the Sun insults the shadow. Surenu then went home to her father Viśvakarmā. As her father pressed her to go to the Sun again, she assumed the form of a mare, went to Uttarakuru and began to graze in the field.

The shadow in her turn gave birth to two sons—Sāvarṇa Manu and Śanaiścara, and she loved them more than her step-sons. Now it so happened that one day, Yama being enraged by her partiality to her own sons, insulted her by raising his foot against her. She in her turn blasphemed and uttered a curse " Let that leg fall away from your body." Yama became frightened out of his wits and explained to his father what has happened, begged his pardon and prayed for the safety of his leg. The Sun meditated that there must be some secret cause of the quarrel for he knew his son to be truthful and pious. However he soothed his son and said : " My son ! it is beyond my power to undo your mother's curse, but you need not be afraid for only some flesh of your foot would fall away." He next asked his wife about the cause of her strange behaviour towards her son, but she remained silent. Whereupon on meditation he became aware of the true cause, insulted the shadow and went out in search of his wife Surenu in the house of Viśvakarmā. The latter made him beautiful in appearance by his skill, divesting him of his superabundant heat. Then the Sun assumed the form of a horse, found out his wife in the form of a mare, walked in company and gave birth to the twins, the Nāsatya and Dasra, who are known as the Asvin twins—the famous physicians. Yama atoned for his sin and became the Religion incarnate; Vaivasvata Manu became the progenitor of the human race, Yamunā became the river, Śanaiscara formed the planet Saturn in the sky, and Sāvarṇa Manu became absorbed in meditation so that he may be the originator of men in the next Manvantara or creation.

In Vedic times the Sun was regarded as the custodian of the eyes. Muir says[1]: "In the Atharvaveda viii. 2. 3, a man dead, or in danger of dying is addressed in these words: वातात् ते प्राणम् अविदम् सूर्य्याच् चक्षुरहम् तव। यत् ते मनस् त्वयि तद् धारयामि सम्वित्स्व अङ्गैर् वद जिह्वया आलपन्। 'I have obtained thy breath from the wind, thine eye from the sun; I place in thee thy soul (मनस्); have sensation in thy limbs; speak, uttering (words) with thy tongue.' Compare A. V. v. 24. 9: सूर्य्यश्चक्षुषाम् अधिपतिः। 'Surya is the superintending lord of the eyes': and in A.V. xi. 8. 31: सूर्य्यश्चक्षुर्वातः प्राणम् पुरुषस्य वि भेजिरे॥ 'Sūrya occupied the eye, and Vāta (the wind) the breath of Purusha (or man).' See also A. V. xix. 43. 2, 3. Compare further Plato, Repub. vi. 18, where Socrates says of the eye: πλλ

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[1] Muir, Sanskrit Texts, Vol. V, p. 298, foot-note.

GSL

ηλιοειδεστατον γε οιμαι των περι τας αισθησεις οργανων. 'I regard it (the eye) as of all the organs of sensation, possessing the most affinity to the sun.' Eur. Suppl. 532 f. Οθεν δεκαστον εις το σωμ αφικετο ενταυθ απηλθε, πυενμα μεν προς αιθερα, το σωμα δες γην. 'But each element of the body has departed to the quarter whence it came, the breath to the æther, the body itself to the earth.' A similar idea is expressed in a verse of Goethe, which I had formerly read, and for a copy of which, with the context, I am indebted to Professor Aufrecht. The passage occurs in the introduction to the Farbenlehre (Ed. 1858, Vol. XLVIII, p. 5). and is as follows : 'Hierbei erinnern wir uns der alten ionischen Schule, welche mit so groszer Bedeutsamkeit immer wiederholte : nur von gleichem werde Gleiches erkannt ; wie auch der Worte eines alten Mystikers, die wir in deutschen Reimen folgendermaszen ausdrücken möchten :

> Wär' nicht das Auge sonnenhaft,
> Wie könnten wir das Licht erblicken ?
> Lebt' nicht in uns des Gottes eigne Kraft,
> Wie könnt' uns Göttliches entzücken ?

Jene unmittelbare Verwandtschaft des Lichtes und des Auges wird niemand laügnen, aber ' u.s.w."

Books :—

1. Bhāskara Saṁhitā : A treatise on medicine by Bhāskara. The work is not procurable now, but it is referred to in the Brahmavaivarta Purāṇa.[1]

2. Jñāna Bhāskara : " Conversations between *Sūrya* and his charioteer *Aruṇa* (*Kāsyapa*) on the evils of human existence, their causes and remedies." It deals with different diseases—the result of our actions in a previous life—

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[1] See foot-note, p. 7.

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"The pathological descriptions are sometimes very detailed, but the method of their cure is entirely of the piacular order; medical treatment being jealously excluded, and almost every case being represented as *duścikitsyatama*, and only to be approached by penance, sacrifices and donations to the officiating priests."

Beginning: नम: श्रीहयग्रीवाय। श्रीगणेशाय। ओं नम: श्रीसूर्य्याय।

आनंदयन् बुधमन:कमलं स्वभाभि:
प्रध्वंसयन् वृजिनदुर्दिनमंतरस्थं।
कल्पांतरोपचितकर्मविलोक हेतु:
स ज्ञानभास्कर उदेतु हृदंबरे न: ॥

संदिह्यमाने संदिग्धे संधिचति च वस्तूनि।
ज्ञानमुद्भासयन्नेष जयति ज्ञानभास्कर: ॥

गते मयि स्वविषयानवाप्तज्ञानमंडले।
पुरुषेऽर्कांशसंभूते प्रविष्टे चार्कमंडलं॥
प्रणम्य शिरसा देवं भानुमंतं कृतांजलि:।
प्रश्रयावनतो भूत्वा अरुणो वाक्यमब्रवीत्॥

MSS.:—1. I. O. 2719.
2. Berl. Cat., p. 287.
3. Or. 1254 (British Museum).

Formulæ attributed to Bhāskara:—

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1. Bhāskara Lavaṇa.

भास्करलवणम् ।

पिप्पली पिप्पलीमूलं धन्याककृष्णजीरकम् ।
सैन्धवञ्च विड़ञ्चैव पत्रं तालीशकेशरम् ॥
एषां द्विपलिकान् भागान् पञ्चसौवर्चलस्य च ।
मरिचाजाजि शुण्ठीनामेकैकस्य पलं पलम् ॥
त्वगेले चार्द्ध भागे च सामुद्रात् कुड़वद्वयम् ।
दाड़िमात् कुड़वञ्चैव द्वे पले चाम्लवेतसात् ॥
एतच्चूर्णीकृतं सूक्ष्मं गन्धाढ्यममृतोपमम् ।
लवणं भास्करं नाम भास्करेण विनिर्म्मितम् ॥
जगतस्तु हितार्थाय वातश्लेष्मामयापहम् ।
वातगुल्मं निहन्त्येतत् वातशूलानि यानि च ।
तक्रमस्तुसुरासीधुशुक्तकाञ्जिकयोजितम् ॥
जाङ्गलानान्तु मांसेन रसेषु विविधेषु च ।
मन्दाग्नेर्वर्द्धतः शक्तौ भवेदाग्नेव पावकः ॥
अर्शांसि ग्रहणीदोषं कुष्ठामयभगन्दरान् ।
हृद्रोगमामदोषांश्च विविधानुदरस्थितान् ॥
प्लीहानमश्मरीञ्चैव श्वासकासोदरक्रिमीन् ॥
विशेषतः शर्करादीन् रोगान् नानाविधांस्तथा ।
पाण्डुरोगांश्च विविधान् नाशयत्यशनिर्यथा ॥

Bhāskara Cūrṇa.

भास्करचूर्णम् ।

तालीशग्रन्थिधान्येभवरविड़कणा कृष्णजीरकदाम्ल-
सामुद्रं विश्वजीरोषणमथरुचकं त्वक् त्रुटी दाड़िमं द्वैः ।
विंशत्यष्टत्रिपञ्चैकचतुरवयवैर्भास्करोऽग्नेऽथवाम्लै-
गुल्मामार्शोऽर्त्तिकासग्रहणिजठरहृत्शूलरुग्गदघ्न पचाति ॥

BHĀSKARA LAVAṆA CŪRṆA.[1]

भास्करलवणचूर्णम् ।

सामुद्रलवणं कार्य्यमष्टकर्षमितं बुधैः ।
पञ्चसौवर्च्चलं ग्राह्यं विड्सैन्धवधान्यकम् ॥
पिप्पली पिप्पलीमूलं कृष्णजीरकपत्रकम् ।
नागकेशरतालीशमम्लवेतसकं तथा ॥
द्विकर्षमात्राण्येतानि प्रत्येकं कारयेद्बुधः ।
मरिचं जीरकं विश्वमेकैकं कर्षमात्रकम् ॥
दाड़िमं स्याच्चतुःकर्षं त्वगेले चार्द्धकार्षिके ।
वीजपूररसेनैव भावितं सप्तवारकम् ॥
एतच्चूर्णीकृतं सर्व्वं लवणं भास्कराभिधम् ।
शाणप्रमाणं देयन्तु मस्तुतक्रसुरासवैः ॥
वातश्लेष्मभवं गुल्मं प्लीहानमुदरञ्चयम् ।
अर्शांसि ग्रहणीं कुष्ठं विड्विबन्धं भगन्दरम् ॥
शोफं शूलं श्वासकासश्चामदोषञ्च हृद्रुजम् ।
मन्दाग्निं नाशयेदेतद्दीपनं पाचनं परम् ।
सर्व्वलोकहितार्थाय भास्करेणोदितं पुरा ॥

2. UDARKA RASA.

उदर्करस ।

कोलमानगगणं सुमारितं
रक्तभस्मभववीजसम्भवं ।
तत्समं मुस्तसुवर्णशानकं
शानमानमथ लौहचूर्णकं ॥
मर्द्दयेदथ कुमारिकाद्रवै—
—राढ़की परिमितां वटीञ्चरेत् ।
भक्षयेन्मधुकणायुतां जयेत्
सूतिकाख्यगद माशु दारुणं ॥

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[1] For a translation of the formula, see Dutt's Materia Medica of the Hindus, pp. 86-7.

सामवायुकफसम्भवं गदं
हेलयाशु सकलं जयेद्ध्रुवं ।
वर्ण-वुद्धि-वल-मांस-शोणितं
वर्द्धयेदयमुदर्कसंज्ञकः ॥
भास्करेण कथितो रसेश्वरः
सोमरोगकुलनाशनोपि सः ॥

In the Ṛgveda the following hymns refer to Sūrya :—

Rv. i. 50. 1 : The sun knows all animated creatures.
2 : He drives away the night.
3 : His rays observe all people.
4 : Sun, the source of all light.
5 : He rises before gods and men.
6 : Sun invoked as purifier and destroyer of evil.
7 : Sun makes the day.
8 : Sun is borne in his car by seven horses.
9 : He is driving in a car drawn by seven "daughters of the car."
10 : He is the best of all light.
11 : Sun is prayed for to cure heart disease, हृद्रोग and Harimāṇa disease or yellowness of body.
12 : We transfer the yellowness of (our body) to Śuka and Śārikā birds, and to turmeric.

शुकेषु मे हरिमाणं रोपणाकासु दध्मसि ।
अथो हारिद्रवेषु मे हरिमाणं नि दध्मसि ॥

13 : He has destroyed my diseases.
115. 1 : Sun, the soul of animated and inanimated creations.

i. 115. 2 : Sun follows the Dawn.

3 : Harits are his horses; they spread over the world.

4 : Night falls when these horses are unharnessed.

5 : The Harits, when the sun is in the middle of the sky, hold his unusual splendour on one side, but cause darkness on the other side.

6 : The Harits are prayed to absolve us from our sins.

191. 8 : The Sun is rising in the East. He destroys all the unseen (poisonous creatures) and the Jātudhānīs.

9 : He is rising for the good of all creatures. He destroys the unseen poison.

10 : I throw the poison in the orb of the Sun. As he does not die, so we will not die. The Sun-god, driving his horses, destroys the poison at a distance. The poison is converted into nectar.

11 : The small bird "Sakuntika" ate the poison.

12 : Agni has twenty one flames. They destroy the poison.

13 : I shall recite the names of ninety nine rivers which destroy the poison.

14 : Let twenty one peahen and seven rivers destroy the poison in the body.

15 : The small animal mongoose will destroy the poison.

16 : The mongoose came and said "oh Scorpion, your poison is sapless."

iv. 13. 1 : Sun is rising.
2 : The devas begin their works.
3 : Seven horses carry the sun, who knows all living beings.
4 : Sun's rays drive away the night.
5 : Sun as a pillar supports the heaven. None can stop his journey.

v. 40. 5 : Āsura Svarbhānu covered Sun with darkness.
6 : Indra then dispelled darkness.
7 : Prayer of Sūrya to Atri and King Varuṇa for help.
8 : Atri made eyes for Sun by mantras.
9 : Atri's sons dispelled darkness caused by Svarbhānu.

45. 1 : Sun has risen after dispelling darkness.
2 : Sun is spreading his light.
9 : Sun, the lord of seven horses, is coming down and is spreading light through his rays.
10 : His worshippers are drawing Sun, as he rides on his horses across the bright waters like a vessel.

59. 5 : The maruts are covering the eyes of Sun by rains.

vii. 60. 1 : O Sūrya, tell us that we are to-day sinless.
2 : Sun, the witness of men. He nourishes the animate and the inanimate.
3 : The seven horses are carrying him. He sees all places and all animals.
4 : Mitra, Aryamā and Varuṇa make way for Sun.

x. 37. 1 : Sun, the son of sky, sees all objects.

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x. 37. 2 : The sky, days, the world, the living beings and sun rest on truth.

3 : Prayer to Sun to rise with his unusual splendour.

4 : O Sun, with your rays, remove our poverty, and destroy our sins, diseases, and bad dreams.

5 : You have been sent to protect the various works of the world.

6 : May we be long-lived, and enjoy happiness till old age.

7 : May we every day see you, with healthy body and surrounded by progeny. May we live for ever and see you.

8 : You are pleasing to all. May we see you every day with our living bodies.

9 : Oh yellow-haired sun! May we see you rise every day.

10 : May your sight do us good and may your days and your rays, your coldness and your heat be good to us, whether we live in houses, or travel on roads.

11 : May all the animals, biped or quadruped, under our charge be happy; let all animals eat, drink and be well-nourished and strong.

12 : Transfer our sins to those who are averse to charity and who try to injure us.

170. 1 : Prayer to Sūrya to grant long life to sacrificers. He protects all living beings and nourishes them.

2 : Sun is luminous, large, well-placed in the sky, and gives food to all.

x. 170. 3 : He is the first and foremost of all luminous bodies. He conquers all, and is the giver of light. He is the very strength and energy.

4 : Your strength nourishes the whole world.

See also Nirukta, xii. 14-16.

Hymns in the Ṛgveda addressed to Savitā :—

Rv. i. 22. 5 : Golden-handed (हिरण्यपाणि) Savitā is prayed for protection.

6 : Savitā absorbs water.

7 : Savitā, the distributor of riches, and illuminator of men.

8 : Savitā, the giver of riches.

35. 1 : Savitā is prayed for protection.

2 : Dispelling darkness, awakening men, he is travelling over the world in his golden car.

3 : He has two roads—upwards and downwards. He moves by two white horses.

4 : His golden car with golden yokes.

5 : The white legged horses harnessed to golden yokes are drawing his car.

6 : As the car rests on the pin of the axle, the moon and the stars rest on the sun.

7 : His rays are full of vibrations, and are life giver.

8 : Savitā, the golden-eyed.

9 : Savitā is removing diseases.

10 : He destroys Rākṣasas and Yātudhānas.

11 : His ancient paths in the sky are free from dust.

ii. 38. 1 : He rises every day to produce the world.

2 : The luminous, large-handed Savitā extends his hands. For him the water flows and the wind blows.

3 : Night falls after his work is done. Then all men cease work.

4 : Men do work when he rises again.

5 : Mother Dawn, sent by Savitā, bestows her son Agni the main share of sacrifices.

6 : When the Sun sets, men return home.

7 : You have allotted trees to birds. None can injure Savitā.

8 : Varuṇa gives shelter to all animals that move. Birds and beasts return to their abodes.

9 : Indra, Varuṇa, Mitra, Aryamā or Rudra do not injure Sun.

10 : Men adore him ; he protects the wives of the devas. May we be his favourite in acquiring and hoarding riches and animals.

11 : May we get riches from Sun.

iii. 56. 6 : Prayer to Savitā or Bhaga to send us riches thrice every day.

7 : Mitra, Varuṇa, Earth and Sky expect riches from Sun.

62. 10 : We meditate on the adorable splendour of the divine Savitā who directs our intellect aright. This is the famous Gāyatri prayer of the Brahmins.

12 : We pray for food and riches from Savitā and Bhaga.

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iv. 53. 1: Let the great Savitā give us riches every day.
2: Savitā, the Prajāpati or lord of creation wears golden armour.
3: He sends his rays every day for the act of creation.
4: Savitā, who obeys fixed laws, is the Lord of the world.
5: He kindly nourishes me by the three seasons—Summer, Rain and Winter.
6: May Sun bestow happiness on us.
7: May he come with the Seasons. May he give us sons and son's sons with food.

54. 1: Prayer for riches.
2: You produce Soma, the cause of immortality; you give us life.
3: Prayer to make us sinless.
4: He is the support of the world.
5: Give us house to live in. The men obey your command.
6: We sacrifice Soma for you thrice every day. May Indra, Earth, Sky, Sindhu and Ādityas make us happy.

v. 81. 1: The splendour of god Savitā is beyond the power of hymns.
2: He whose form is the universe (विश्वरूप), does good to the bipeds and the quadrupeds.
3: The other gods derive splendour and strength from Sun.
4: Oh Savitā, you join with the Sun's rays. You pass through nights on both sides. Be our friend by your deeds.

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v. 81. 5 : You rule the works of all creatures. You become Puṣā by your motion.
82. 1 : Prayer for riches.
2 : None can destroy the famous riches of Savitā.
3 : Prayer for riches from Savitā or Bhaga.
4 : Give us progeny and riches, and drive away our bad dreams.
5 : Remove our bad luck and send us what is good for us.
6 : May we be sinless before Aditi.
7 : We adore Sun, the truthful and the protector of good men.
8 : We contemplate the adorable Sun.
9 : He resuscitates all living beings.
vii. 35. 8 : May Sun be peaceful to us. May water be peaceful to us.
9 : May air be peaceful to us.
10 : May Savitā be peaceful to us.
38. 1 : He sends his golden rays.
2 : Kindly hear our prayers.
3 : You protect and nourish us.
4 : Aditi, Varuṇa, Mitra and Aryamā pray Savitā.
5 : May goddess of speech nourish us through our cows. Ahivudhnya is mentioned as a name of Sun.
6 : Prayers for riches. Bhaga another name of Sun.
7 : May the Rākṣasas be injured and the chronic diseases be removed from us.
8 : Nourish us through milk.
45. 1 : May Savitā appear with riches in hand for the good of men.

vii. 45. 2 : Prayer to Savitā.

3 : Let Savitā send us riches.

4 : Good-tongued Savitā with riches in his hands.

149. 1 : Savitā has kept this earth steady by many appliances without any support; he has tied down the heaven, he gets water from clouds full of water.

2 : Savitā, son of water. From him have appeared the earth, the sky, the heavens, and the worlds.

3 : The other immortal gods have appeared after him.

4 : Let the adorable Savitā come to us like a husband to his wife.

5 : We are careful for your service (nursing).

INDRA.

Indra is represented in the Vedas as the chief of the gods in heaven, and to him the highest divine attributes are often ascribed in the Ṛgveda. But he stands in the second rank in the Purāṇas, as next to the famous triad : Bramhā, Viṣṇu and Maheśvara. He is the son of Kaśyapa; his weapon is the thunderbolt made either of iron (1.80. 12 ; 1.81.4) or of the bones of the sage Dadhici. His Vāhana is the elephant Airāvata and he is said to have destroyed the stone-built cities of the Asuras. He is slayer of Vṛtra in battle, though the honour is also claimed by other gods, and the recoverer of cows from the Panis. His horses are called Hari (1.10.3 ; 1.16.2 ; 1.20.2 ; 1.81.4 ; 1.167.1) and also Etāśa (1.121.13). His devotion to Soma juice is proverbial and more hymns are addressed to him than to any other gods in the Vedas. His wife is Indrāṇī, better known as Śacī (1.82.526), and his son, Jayanta. In later literature his sensuality is much dilated upon. In Mahābhārata he is said to have seduced Ahalyā, the wife of the sage Gautama, and in Rāmāyaṇa he appears to have been defeated by Megha-nāda, the son of Rāvaṇa, king of Ceylon, as a punishment for the seduction. The legend how he was compelled by the sage Cyavana to allow the Aśvins to partake of the Soma libations is related elsewhere (see Cyavana).

He learned the Science of Medicine from the Aśvins and then taught the science to Ātreya and Bharadvāja.

> अश्विभ्यां भगवान् शक्रः प्रतिपेदे ह केवलम् ।
> ऋषिप्रोक्तो भरद्वाजस्तस्माच्छक्रमुपागमत् ॥
>
> Caraka Saṁhitā. I. i.

ब्रह्मास्मृत्वाऽऽयुषो वेदं प्रजापतिमजिग्रहत्।
सोऽश्विनौ तौ सहस्राक्ष सोऽत्रिपुत्रादिकान्मुनीन्॥

Aṣṭāñga Hṛdaya Saṁhitā, I.

संदृश्य दस्रयोरिन्द्रः कर्म्माण्येतानि यत्नवान्।
आयुर्व्वेदं निरुद्वेगं तौ ययाचे शचीपतिः॥
नासत्यौ सत्यसन्धेन शक्रेण किल याचितौ।
आयुर्व्वेदं यथाधीतं ददतुः शतमन्यवे॥
नासत्याभ्यामधीत्यैष आयुर्व्वेदं शतक्रतुः।
अध्यापयामास बहुनात्रेय प्रमुखान् मुनीन्॥

Bhāva Prokāśa, I. i.

In the Yayurveda xxv. 46-47 k (2 & 3), Indra is prayed for medicine and health. With reference to the healing skill of Indra, see the Ṛgveda vii. 1, v. 12, as well as the Atharvaveda xiv. 2, v. 12 :—"That is the Bountiful one, who without a ligature, before the severance of the cervical cartilage, effect a union."[1]

Indra is said to have entered into the womb of Diti and cut the fœtus into seven pieces. See Rāmāyaṇa, I. xlvi.

तस्याः शरीरविवरं प्रविवेश पुरन्दरः।
गर्भञ्च सप्तधा राम। चिच्छेद परमात्मवान्॥
भिद्यमानस्ततो गर्भो वज्रेण शतपर्व्वणा।
रुरोद सुस्वरं राम। ततो दितिरबुध्यत॥

Rāmāyaṇa. i. xlvi, vs. 18 & 19.

In the Kuśa Jātaka, Ayúdā, wife of King Ikṣvāku, obtained from Indra a pill which promoted pregnancy. This she dissolved in water, and took a small quantity of the mixture, distributing the rest of it to her rivals.[2]

His desciples.—Indra is said to have taught the sages Bhṛgu, Añgirā, Atri, Vaśiṣṭha, Kaśyapa, Agastya, Pulastay,

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[1] Hoernle, J. R. A. S., 1906, p. 922.

[2] Mitra, Nepalese Buddhist Literature, p. 110.

Vāmadeva and Asita Gautama, about the Rasāyaṇa or the Science and Art of Tonics to prolong life from the Āyurveda, which he received from the Aśvins. These formulæ, as taught by Indra, are called Aindriya Rasāyaṇa

* * * *आयुर्व्वेदमश्विनौ मह्यं प्रयच्छताम। प्रजापतिरश्विभ्याम् । * * *
अथेन्द्रस्तदायुर्व्वेदामृतमृषिभ्यः संक्रम्योवाचैतं सर्व्वमनुष्ठेयञ्च ।

Caraka Saṁhitā. VI. i, p. 323.

INCIDENTS OF INDRA'S LIFE.

1. He killed Śuṣṇa Asura and helped Kutsa: 1.11.7; 1.33.12; 1.51.6; 1.63.3; 1.101.2; 1.103.8; 1.121.9; 1.175.4; 2.14.5; 2.19.6; 3.31.8; 4.16.9-12; 4.30.13; 5.29.8; 6.18.8 and 13; 6.26.3; 7.19.2; 8.1.28; 8.6.14; 8.51.8; 8.53.2; 8.96.17; 10.49.3; 10.61.13; 10.99.9.
2. Killed Asura Ahi: 1.32.1.5.13-14; 1.61.8; 1.80.1; 1.103.2 and 7; 2.11.5; 2.12.3; 2.15.1; 4.19.9; 5.17.9; 6.18.13.
3. Killed Vṛtra Asura: 1.32.5-11; 1.23.11 and 13; 1.51.4; 1.54.10; 1.56.5-6; 1.57.6; 1.61.10-12; 1.80.4-7,10,12; 1.84.13-14; 1.103.2,8; 1.121.11; 2.11.18; 3.31.8; 3.32.4; 5.17.8; 7.19.5; 8.8.19; 8.6.16; 8.15.3; 8.32.26; 10.48.8; 10.49.6; 10.113.8.
4. Killed Pani and helped Añgiras: 1.32.11-12; 1.51.3; 1.62.2-3; 1.101.5; 6.33.2.
5. Killed Pipru Asura and helped Ṛgiśvāna, son of Uśija: 1.51.5; 1.101.2; 1.103.8; 2.14.5; 4.16.13; 6.18.8; 8.32.2; 8.49.10; 10.99.11; 10.138.3.
6. Killed Śamvara, son of Kulitara and helped Divodāsa: 1.51.6; 1.54.6; 1.101.2; 1.103.8; 2.12.11; 2.14.6; 2.19.6; 4.16.13; 4.30.20; 6.26.3; 6.31.4; 6.43.1; 6.47.21; 7.18.20.

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7. Killed Arbuda: 1.51.6; 2.11.20; 2.14.4; 4.30.14; 8.3.19.
8. Killed Arya and Citraratha (4.30.18), Urana (2.14.4), Aśna (2.14.5), Aśusa (2.19.6), Krivi (2.22.2), Śavara (6.18.8) and Ili's soldiers (1.33.12).
9. Killed Namuci (1.53.7; 2.14.5; 7.19.5), Rauhin (1.103.2), Kuthava (1.103.8), Dāsa (7.19.2), Kujava (1.104.3-5; 7.19.2), Aju (1.104.4; 2.19.6; 6.31.3), Dṛbhika (2.14.3), Rudhrika (2.14.5), Varci's son (2.14.6; 4.30.15), Mṛgaya (4.16.13; 8.3.19), Tugra and Vetsu (6.26.4); Vartī Dāsa (6.47.21) and sons of Vṛcivān, son of Varaśikha (6.27.4-5).
10. Killed 6,066 sons of Anu and Druhyus (7.18.14), Bheda (7.18.19), Divaka, son of Manyamān (7.18.19), Sṛvinda and Anarśani (8.32.2), Ahiśu (8.32.2 and 26; 8.77.2), Aurnabābha (8.32.26; 8.77.2), Parṇaya and Karandha (10.48.8), Navavāstva and Vṛhadratha (10.49.6), Nṛsadad's son (10.61.13), Visvarupa, son of Tvaṣṭā for Tritā (10.8.9) and his own father (4.18.12; Taitt. 5.6.1.3.6).
11. Killed Karañja and Parnaya for king Atithigva (Dibodāsa): 1.53.8; 6.18.13; 8.53.2.

„ Vañgṛda for King Ṛgiśvāna: 1.53.8.

„ Kṛṣṇa's pregnant wives for King Ṛgiśvāna: 1.101.1; 1.130.8.

„ 20 kings and 60,099 soldiers for King Suśravā: 1.53.9 and 10.

„ Surya, son of Svaśva for King Sudāsa and Etaśa: 1.61.15; 2.19.5; 5.29.15; 8.1.11; 8.50.9.

„ Aṁhā Asura for king Sudāsa: 1.63.7.

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Killed Kavi, son of Cayamāna for king Sudāsa: 7.18.8.
,, Kujabāca for King Duryyoṇi: 1.174.7.
,, Cumuri and Dhuni for King Dabhīti: 2.15.4 and 9; 6.18.8; 6.26.6; 7.19.4; 10.113.9.
,, Vyaṁsa Asura: 4.18.9.
Drowned Śauta, Kavasa, Vridhu and Druhyu: 7.18.12.

12. Opened the caves of Vala Asura and
Saved the Devas: 1.11.5; 6.18.5; 8.14.8.
,, Kutśa: 1.33.14; 1.106.6; 8.1.11.
,, Daśadyu: 1.33.14.
,, Śvitrā's son from drowning: 1.33.15.
,, Praskanna: 8.3.9.
,, Atri, Vimada and Añgirā: 1.51.3.
,, Ruśam, Svāvaka and Kṛpa: 8.3.12; 8.4.2.
,, Rumaśa: 8.4.2.
,, Kings Narya and Turvīti of Varya Dynasty: 1.54.6.
,, Kings Turvaśu and Jadu: 1.54.6; 1.174.9; 4.30.17; 8.4.1; 10.49.8.
,, Sage Turvīti from drowning: 1.61.11.
,, blind and lame Parāvṛga and made him see and walk: 2.13.12; 2.15.7.
,, Agastya for cows, Aṁśu for riches and Saubhari for food: 8.5.26.
,, Adhigru (8.12.2); Tryasdasyu (8.36.7; 8.41.10), Dirghanakha (8.50.10).

13. Helped King Āyutta (6.18.13), Āyu (8.53.2), Uśana (10.99.9), Parāvṛtta, son of Agru (4.30.16), Turvajāna (Divodāsa-Sāyaṇa) (1.53.10).
Gave young Vṛcasā as wife to old King Kaksivāna: 1.51.13.
,, riches to Kanva, (8.49.10, 8.50.10), Paktha (8.49.10), Daśavraja (8.49.10; 8.50.9) and Gośarpha (8.49.10; 8.50.10).

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Gave the house of son of Anu to Tṛtsu, 7.18.13.
,, Parābat's riches to Śarabha 8.100.6. Placed Atithigu's son in Gungui country (10.48.8).

14. Made Kutsa, Atithigva and Âyu subject to Suśravā: 1.53.10.
,, Turvasu and Jadu obedient to king Sudāsa: 7.19.8.
,, Tṛtsu give his all to Sudāsa, grandson of Devajana, son of Pijavana, 7.18.15.
,, Turvaśa obedient to King Sṛñjaya: 6.27.7.
,, Bṛcīvats ,, ,, Devarāts: 6.27.7.
,, Tugra and Sruadvi obedient to king Kutsa: 10.49.4.
,, Veśa obedient to King Āyū: 10.49.5.
,, Ṣatgṛbhi obedient to King Savya: 10.49.5.
,, Sudāsa and Turvasa friends: 7.18.6; 7.19.8.

15. He became Menā, daughter of King Vṛṣaṇaśca (1.51. 13). Drinks Soma from Sāryāta (1.51.12).

16. He became Vaikuṇṭha Indra, the son of Vikulā, as she prayed for a son like him (10.47).

In the Ṛgveda the following hymns are addressed to Indra:

1: 3: 4.5.6.
4-5.
7-11.
16.
28-33.
51-56.
61-63.
80-84.
100-104.
121.
129-133.
165.
169-170.
173-178.
2: 11-22.
36: 1 and 5.
41-43.
3: 30-54.
4: 16-32.
5: 29-40.
6: 17-29.
32-47.
60.
68.
69.
72.
7: 18-32.
41: 1.
55: 3.
82-85.
93-94.
97-99: 4-6.
104. { 1-8. 19-22. 24.
8: 1-4.

6
12-17
21
24
32-34
36-40
45-46
49-55
59
61-66
68-70
76-82
88-93
95-100

10 : 8
19-6
22-24
27-29
32-33
38
42-44
47-50
54-55
86
89
93, 8
96
99

102-105.
111-113.
116.
119-120.
131.
133-134.
138.
144.
147-148.
152-153.
160-161.
167.
177.
180.

In the following hymns Indra is invoked with other gods :

Indra and Varuṇa : 1.2.9 ; 1.17 ; 4.41 ; 4.42 ; 6.68 ; 7.82-85 ; 8.59.

Indra and Vāyu : 1.2.4-6 ; 4.46 ; 4.47.
„ „ Maruts : 1.6 ; 1.100 ; 1.101.
„ „ Agni : 1.21 ; 1.108-109 ; 3.12 ; 5.86 ; 6.59-6.60 ; 7.93-94.
„ „ Viṣṇu : 1.156 ; 6.68-69. 7.99.4-6.
„ „ Vṛhaspati : 4.49 ; 4.50 ; 7.97-98.
„ „ Puṣā : 6.57.
„ „ Soma : 6.72 ; 7.104 ; 8.1.
„ „ Vāstospati : 7.55.

The following hymns refer to the skill of Indra as a physician :

1.53.11 : Prayer to Indra for beautiful son and long life.
1.54.11 : „ „ „ „ „ „ food.
1.104.6 & 8 „ „ not to destroy embryo and infants.

1.165.15
1.169.8
1.175 : Prayer to Indra for long life, strength and good food.
1.176.6
1.177.5
1.178.5

4.41.6 : Prayer to Indra for long life and power of procreation.

6.24.10 : Prayer to Indra for long life (100 years), with sons and grandsons.

6.39.5 : Prayer to Indra for water, herbs, non-poisonous trees, cows, horses and men.

8.1.12 : Indra sutured the torn parts in the neck before the blood oozed out and even without any styptics.

8.40.12 : Let Indra and Agni nourish us through the three humours (त्रिधातु) ।

8.91 : Apalā's prayer to Indra to remedy her baldness, etc.

10.161 : Prayer to Indra to cure consumption.

Ṛgveda, X. 161 Hymn :

God—Indra. Ṛṣi—Destruction of Phthisis.

1. O patient! I am releasing you from the unknown disease Phthisis, and Rāja Yakṣmā (King of Phthisis). Then you will live. O Indra and Agni! if the patient is under the influence of any evil planet, release him from such influence.

2. Even if this patients' span of life is shortened; or even if he is dead or is in a moribund condition, still I am bringing him back to life from Nirṛti, the god of death, I have so touched him that he will live for one hundred years.

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3. The oblation that I give, has one hundred eyes which grant one hundred years of life. I have brought him back by such oblations. May Indra protect him from all sins and grant him life for one hundred years.

4. O patient! Live for one hundred autumns, one hundred winters with ease and happiness, and one hundred springs. May Indra, Agni, Savitā and Vṛshaṣpati, satisfied with the oblations, grant him life for one hundred years.

5. O patient! I have hold on you. I have brought you round, you have returned rehabilitated. I have recovered your limbs, eyes and entire life.

The following epithets are applied to Indra in the Ṛgveda:

Iśvara (1.26; 1.173.9; 6.23.10); Śatakratu (1.4.8-9; 1.5.8; 1.10.1; 1.16.9; 1.30.6 and 15; 1.51.2; 1.105.8); Sukratu (1.5.6); Suhantta Vajra (7.30.2); Sunāsika (1.9.3; 1.29.2; 1.81.4); Haryyaśva (3.31.3); Vṛtrahā (1.16.8); Maghavan (1.33.12 and 15; 1.102.7 1.133.3; 1.165.9); Meṣa (1.51.1; 1.52.1); Asura (1.54.3; 1.174.1); Suśipra (1.101.10); Medhyātithi (8.1.30); Puruhuta (1.176.3; 6.23.8); Iśāna (1,75.4); Purandara (6.32.3); and Sṛṅgaviṣa's son (8.17.13).

Formulæ ascribed to Indra:—

Formulæ.	Authors.	Books.	Pages.
1. Aindriya Rasāyana, I,	Suramaṇi ...	C. S. VI, I.	323
2. ,, ,, II,	,, ...	,, ,,	326
3. Sarvvato Bhadra ...	Surendra ...	R. S. 8	406
4. Daśmūlādya Taila ...	Purandara ...	G. N.	67
5. Haritakī Avaleha ...	,,	,,	115

1. AINDRIYA RASĀYANA, NO. I.

ऐन्द्रिय रसायनम् ।

तद्यथा—ऐन्द्री ब्राह्मी पयस्या क्षीरपुष्पी श्रावणी महाश्रावणी शतावरी विदारी जीवन्ती पुनर्नवा नागबला स्थिरा वचा छत्रातिच्छत्रा मेदा महामेदा जीवनीयाश्चान्याः पयसा प्रयुक्ताः। षण्मासात् परमायुर्वयश्च तरुणमनामयत्वं स्वरवर्णसम्पदमुपचयं मेधां स्मृतिमुत्तमबलमिष्टांश्चापरान् भावानावहन्ति सिद्धाः ॥

इतीन्द्रोक्तं रसायनम् ।

2. AINDRIYA RASĀYANA, NO. II.

ऐन्द्रिय रसायनम् ।

बल्यानां जीवनीयानां बृंहणीयानाञ्च या दश ।
वयसः स्थापनानाञ्च खदिरस्यासनस्य च ॥
खर्ज्जुराणां मधूकानां मुस्तानामुत्पलस्य च ।
मृद्वीकानां विडङ्गानां वचायाश्चित्रकस्य च ॥
शतावर्य्याः पयस्यायाः पिप्पल्या जोङ्गकस्य च ।
ऋद्ध्या नागबलायाश्च हरिद्राया धवस्य च ॥
त्रिफलाकण्टकार्य्योश्च विदार्य्याश्चन्दनस्य च ।
इक्षूणां शरमूलानां श्रीपर्ण्यास्तिनिशस्य च ॥
रसाः पृथक् पृथक् ग्राह्याः पलाशक्षार एव च ।
एषां पलोन्मितान् भागान् पयो गव्यं चतुर्गुणम् ॥
द्वे पात्रे तिलतैलस्य द्वे च गव्यस्य सर्पिषः ।
तत् साध्यं सर्व्वमेकत्र सुसिद्धं स्नेहमुद्धरेत् ॥
तत्रामलकचूर्णानामाढकं शतभावितम् ।
स्वरसेनैव दातव्यं क्षौद्रस्याभिनवस्य च ॥
शर्कराचूर्णपात्रञ्च प्रस्थमेकं प्रदापयेत् ।
तुगाक्षीर्य्याः सपिप्पल्याः स्थाप्यं संमूर्च्छितञ्च तत् ॥
शुचौ च मार्त्तिके कुम्भे मासार्द्धं घृतभाविते ।
मात्रामग्निसमां तस्य तत ऊर्द्ध्वं प्रयोजयेत् ॥

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हेमताम्रप्रवालानामयसः स्फटिकस्य च ।
मुक्तावैदूर्य्यशङ्खानां चूर्णानां रजतस्य च ॥
प्रक्षिप्य षोड़शीं मात्रां विहायायासमैथुनम् ।
जीर्णं जीर्णं च भुञ्जीत षष्टिकं क्षीरसर्पिषा ॥
सर्व्वरोगप्रशमनं वृष्यमायुष्यमुत्तमम् ।
सत्त्वस्मृतिशरीराग्निबुद्धीन्द्रियबलप्रदम् ॥
परमूर्ज्जस्करञ्चैव वर्णस्वरकरं तथा ।
विषालक्ष्मीप्रशमनं सर्व्ववाचोगतप्रदम् ॥
सिद्धार्थताञ्चाभिनवं वयश्च प्रजाप्रियत्वञ्च यशश्च लोके ।
प्रयोज्यमिच्छद्भिरिदं यथावद्रसायनं ब्राह्ममुदारवीर्य्यम् ॥
इतीन्द्रोक्तरसायनमपरम् ।

3. SARVVATO BHADRA.

सर्व्वतोभद्रः ।

सूतं गन्धं तपनगगणं कान्तलौहस्य चूर्णं ।
कृत्वैकस्मिन् दृशदि पिषितं शक्रवैरस्य वारा ।
गुल्मग्राद्रोगे यकृति गुदजे प्लीह्निसर्व्वज्वरेषु ।
शोथे पाण्डौ क्रिमिकृतगदे सर्व्वतः कामलायां ।
कासे श्वासेच मेहे जठरजगदे सर्व्वदोषप्रभृते ।
ख्यातो योगः सुरमथिक्तः सर्व्वरोगैकहन्ता ॥

4. DAŚAMŪLĀDYA TAILA.

दशमूलाद्यं तैलम् ।

दशाङ्घ्रिकैशरारिष्टब्राह्मीपाठाकटुत्रिकैः ।
शठीपुनर्नवाभार्गीसुरसाम्बुफलत्रिकैः ॥
शङ्खपुष्पीत्वगेलार्कमुनिपादपपल्लवैः ।
अङ्कोटवरुणास्फोतशिरीषकटभीफलैः ॥
कृमिघ्नमूलशम्याकसर्षपामरदारुभिः ।
प्रियङ्गुहिङ्गुमञ्जिष्ठासुमुखातन्दुलीयकैः ॥

गिरिकर्णीवचाकुष्ठकाकुष्ठरजनीद्वयैः ।
मधूकसारसिन्धूत्थसितनीलोत्पलाम्बुदैः ॥
कटुतैलं समैरेभिः पक्वं क्षीरे चतुर्गुणे ।
सोन्मादं हन्त्यपस्मारं पानाभ्यञ्जननावनैः ॥
डाकिनीभूतवेतालनैगमेषादिकान् ग्रहान् ।
कृत्याभिचाररक्षांसि नाशयत्यखिलान्यपि ॥
तैलमेतत्सुरेन्द्रेण नन्दस्य कथितं पुरा ।
बालस्य किल रक्षार्थं विष्णोरमिततेजसः ॥
अभ्यज्य सर्वगात्राणि भोक्तव्यं रिपुवेश्मनि ।
तैलमभ्यञ्जनं श्रेष्ठं वसतोऽरातिसङ्कटे ॥
अथ विलिप्तभगा भगशालिनी यदि रमेत नरं दिवसे शुभे ।
मदनसायकजर्जरितोरसो भवति तस्य तयाऽपहृतं मनः ॥
ताम्बूलमुखवासेषु व्यञ्जनाहारयोगतः ।
अनामिकाग्रसंयुक्तं वशीकरणमुत्तमम् ॥

5. HARĪTAKĪ AVALEHA.

हरीतक्यवलेहः ।

भार्गीजटापलशतं सलिलार्मणाभ्यां
युक्तं च मूलतुलया सहितं विपाच्य ।
पादस्थिते तु शतमत्र हरीतकीनां
पक्वाभ्यसुज्ज्वलगुडस्य शतेन सार्धम् ॥
उत्तार्य तत्र शिशिरे मधुनः पलानि
चत्वारि च त्रिगुणितानि पलत्रयं च ।
व्योषं त्रुटिस्त्वगिभकेसरपत्रकाणा-
मेषां पलं खलु निधेयमथोपयुज्य ॥
श्वासं सकासमपि शोषमथातिहिक्का-
मेकाहिकं ज्वरमपीनसमुत्कटं च ।
हन्याद्रसायनमिदं हि पुरन्दरस्य
प्रोक्तं सहस्रकरपुत्रभिषग्वराभ्याम् ॥

KĀRTIKEYA.

God Kārtikeya, son of Goddess Pārvatī is said to have written a work on medicine called Vāhaṭagrantha. This is a "treatise dealing with the methods of diagnosing diseases and with the preparation of different kinds of medicines for curing them. It is said to have been revealed by God Subrahmaṇya, son of Goddess Parvatī."

MSS. : No. 13176-7, G.O.M.L. (Madras).

Begins :—

वागीशाद्यास्सुमनसः * तं नमामि गजाननम् ॥

* * *

अस्य श्रीपार्व्वतीयस्य प्रियसुनुर्गुणोन्नतः ।
षण्मुखे रचिते चैव वाहटग्रन्थमुत्तमम् ॥
वैद्यानां यशसेऽर्थाय व्याधितानां हिताय च ।
धत्ते धन्वन्तरिप्रोक्तं समस्सूर्योदये यथा ॥

Colophon :

इति—श्रीगौरीपुत्रकार्त्तिकेयविरचिते वाहटग्रन्थे निदानयोगो नाम प्रथमः परिच्छेदः ॥

The MS. No. 13177 contains the following Chapters :—

१। निदान योगः ।
२। कषाय योगः ।
३। पथ्यापथ्य योगः ।
४। तैलयोगः ।
५। घृतयोगः ।
६। लेह्यवर्ग समाप्तिः ।
७। चूर्णवटक योगः ।
८। औषधयोगः ।
९। रसयोगः ।

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SARASVATĪ.

Sarasvatī, the goddess of learning in later literature, is not of very great importance in the Ṛgveda. She is celebrated both as a river and as a goddess (तत्र सरस्वती इति एतस्य नदीवद्देवतावच्च निगमा भवन्ति । Yāska. Nir. ii. 23). Sāyaṇa also refers to the dual nature of the deity (द्विविधा हि सरस्वती विग्रहवद्देवता नदीरूपा च). As a river see Ṛgveda i. 3. 12.; vi. 52. 6; 61. 2. 8. 10. 13; vii. 36. 6; 95. 1; x. 17. 10. 1.—(Vāj. S. 4. 2; Atharva Veda vi. 51. 2); 30. 12; 64. 9; 75. 5. The river Sarasvatī, which is now a narrow stream loosing its way in the Rajputana desert, is described in vii. 95. 2, as a mighty river rising from the Himalayas and falling down into the sea. King Citra and others are said to have dwelt on or near the Sarasvatī. As a goddess she is said to be the consort of Sarasvān Deva (vii. 96. 4-6) and is invoked for wives and offspring, also for plenty and protection. [See also v. 43. 11; vi. 49. 7; 61. 11.] She is described as white in colour (vii. 95. 6; 96. 2.). From her two prolific breasts, which are said to be truth and falsehood (Ait. Br., iv. 1), the worshippers suck prosperity and riches. (i. 89. 3; 164. 49). As a river nymph, she is further described as a support and a fortress (vii. 95. 1), and as bestowing wealth, fatness, and fertility (vii. 95. 2). See also ii. 41. 16; vi. 61. 14. In vi. 61. 1, she is represented as having given to Vadhryaśva a son, Divodāsa by name. (See also i. 3. 10. 11; 89. 3; 164. 49; ii. 3. 8; 30. 8; vi. 49. 7; 61. 3. 4. 7; viii. 21. 17; ix. 67. 32; x. 17. 8. 9). She is described as the receptacle of all the powers of life and the bestower of offspring (ii. 41. 17); and in

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x. 184. 2, she is associated with the deities who assist procreation (गर्भं धेहि सरस्वती).

"In Ṛgveda x. 131. 5 (=Vāj. S. x. 34) where the Aśvins are said to have defended Indra, Sarasvatī is declared to have waited upon him. And in Vāj. S. xix. 12 it is said: 'The gods celebrated a healing sacrifice; the Aśvins physicians, and Sarasvatī too a physician, through speech, communicated vigour to Indra.' The Aśvins and Sarasvatī are also connected with each other in Vāj. S. xix. 12, 15, 18, 34, 80-83, 88-90, 93-95; xx. 56-69, 73-76, 90. In xix. 94, it is said that 'Sarasvatī, wife of the Aśvins, holds a well-formed embryo in her womb.'[1]

In the Ṛgveda she is not identified with Vāch, who is said to be the wife of Indra (ii. 8. 8. 4), but in the later mythologies she became the goddess of learning, speech and eloquence and the spouse of Bramhā, and is invoked as a muse. As goddess of learning, her reputation is shared by two other goddesses; and according to Sāyaṇa,[2] Bhāratī is the goddess of learning in heaven, Ilā is the terrestrial goddess, and Sarasvatī, the goddess of the aerial regions. Sarasvatī is identified with Agni, and the three goddesses Ilā, Sarasvatī and Bhāratī refer to Agni (i. 13. 9; 142. 9; 118. 8; ii. 1. 11). In the Mahābhārata (Sāntiparva, v. 12920) she is called the mother of the Vedas, and in v. 6811, the celestial goddess is described as produced from heaven. In Taitt. Br., ii. 8. 8. 5. she is said to be the wife of Indra and to be the deity sought after by the Ṛṣis who composed the Vedic hymns.

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[1] Muir's Texts, Vol. V, p. 342.

[2] "भरतः आदित्यः। तस्य सम्बन्धिनी भारति। ताद्दशीद्युलोकदेवते। हे इळे भूदेवे! हे सरस्वति! सरीवाक् उदकं वा तद्वति अन्तरीक्षदेवता"।

Sāyaṇa: Commentary, i. 188. 8.

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Formulæ attributed to Sarasvatī :—

1. Sārasvat Ghṛta : an oleogenous medicine to cure sterility in women and seminal insufficiency in men.

अप्रजानां च नारीणां नराणां स्वल्परेतसां ।
घृतं सारस्वतं नाम सारस्वत्या विनिर्मितं ॥

End of Maṇḍūkabrahmikalpa.

G.O.M.L. xxiii, No. 13184.

2. Sārasvat Ghṛta : In the Bower MSS., p. 39, a rmula for the clarified butter of Sarasvatī is given. By its use, a man attains memory and intelligence. It cures stammering and dumbness.

Sārasvat Ghṛta.

सारस्वतम् घृतम् ।

आजम् पयः शृङ्गवेरम् वचा शिग्रुर्हरीतकी ।
पिप्पल्यो मरिचम् पाठा सैन्धवन्दशमम् घृतम् ॥
शृङ्गवेरादयो भागा लवणान्ताः पलीनखाः ।
चतुर्गुणेन पयसा घृतप्रस्थं विपाचयेत् ॥
अस्योपयोगाद्विन्देत स्मृतिम् मेधाञ्च मानवः ।
यड़गदगदमूकं पानादेवास्यशाम्यतिति ॥

The following hymns are addressed to Sarasvatī in the Ṛgveda

i. 3. 10 : May Sarasvatī, the purifier, like our sacrifices.

11 : Sarasvatī, the generator of true words and the teacher of pious men, hath accepted our offerings.

12 : Sarasvatī as she flows hath produced a copious flood and has stimulated all knowledge.

13. 9 : May Ilā, Sarasvatī and Mahī, the three goddesses take their seats on the Kuśa grass.

89. 3 : May the gracious Sarasvatī bestow riches and happiness on us.

142. 9 : May Hotrā, Bhāratī, Ilā, Sarasvatī, and Mahī sit on the Kuśa grass.

164. 49 : Her two prolific breasts are said to be the source of all prosperity, riches and happiness.

188. 8 : Prayer to Bhāratī, Sarasvatī and Ilā for prosperity.

ii. 1. 11 : Hotrā, Bhāratī, Ilā and Sarasvatī, the slayer of Vṛtra, are identified with Agni.

3. 8 : May Sarasvatī, Ilā and Bhāratī remain in our sacrificial altar, perfect our hymns and preserve the sacrifices.

30. 8 : O Sarasvatī ! protect us. With the help of Maruts conquer our enemies. Indra killed the chief of the proud Śaṇdikās.

32. 8 : Sarasvatī is prayed for with the goddesses Sinivālī, Rākā, Guñgu for procreation, and Indrāṇi and Varuṇāṇi for protection.

41. 16 : Prayer to Sarasvatī : She is the best of mothers, best of rivers and best of goddesses.

17 : O Sarasvatī ! you are resplendent. Food is dependent on you. You feel happy by drinking Soma juice from the Śunahotras. O Goddess ! grant us offspring.

18 : O Sarasvatī, the source of food and water ! accept the oblations of the Gṛtsamadas.

iii. 4. 8 : May Bhāratī, Ilā and Sarasvatī with the Sārasvatas sit on the Kuṣa grass.

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54. 13 : May Maruts and Sarasvatī hear our prayers and grant us progeny.

v. 5. 8 : May Ilā, Sarasvatī and Mahī sit on the Kuṣa grass.

42. 12 : May the rivers, Sarasvatī and divine Rākā desire to bestow riches on us.

43. 11 : May the goddess Sarasvatī come down from the sky to our sacrifice. May she be pleased with our hymns, and may she send us rain.

vi. 49. 7 : May the beautiful heroine Sarasvatī, the purifier, and of wondrous gait, perfect our sacrifice. May she be pleased to give her worshippers a strongly built house and happiness.

52. 6 : May Indra and watery Sarasvatī be near us for our protection.

61. 1 : She gave Vadhryaśva a son and killed Pani.

2 : She is breaking the bases of mountains with her torrents.

3 : You have killed the son of Vṛṣaya and other haters of gods.

4 : May she satisfy us with food and riches.

61. 5 : You save men who wage war for riches, if they pray you.

6 : Protect us in war and like Puṣā, bestow riches on us.

7 : May the terrible sarasvatī in her golden chariot desire to hear our prayer.

8 : Her powerful torrents flow with sound.

9 : May she conquer our enemies and bring her watery sisters.

10 : May we always sadore Sarasvatī with her seven sisters.

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11 : She fills the terrestrial and aerial regions with her radiance; may she protect us from our culminators.

12 : May she be fit for prayer in every war.

13 : She is the swiftest of all rivers, she is the object of adoration by the wise.

14 : O Sarasvatī ! lead us to riches. Do not make us mean. Do not harass us with floods. Accept our friendship and our house. May we be not removed from you to strange regions.

vii. 35. 11 : May Sarasvatī grant us peace.

36. 6 : Sindhu, the mother of rivers, and the seventh river Sarasvatī, swollen with water, are flowing.

95. 1 : Sarasvatī, full of water, is running freely.

2 : She runs from mountain to ocean, bestowing wealth and fertility; she gave Nahuṣa butter and milk.

3 : Sārasvān, grants his worshippers powerful sons and rehabilitates their bodies.

4 : She is rich and always kind to her friends. May she hear our songs in the sacrifice.

5 : May we be united with you for protection.

6 : O white Goddess ! bestow on the worshippers food, and rear us with your benediction.

96. 1 : O Vaśiṣṭha ! sing songs in prayer to Sarasvatī.

2 : O white Sarasvatī ! men get food and riches from you.

3 : May she do us good and stimulate our intellect.

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4 : We want wife and sons; we adore Sārasvān Deva.

5 : O Sārasvān ! protect us by your water.

6 : May we get sons and food from him.

viii. 21. 17 : Has Indra given me these riches ? Has the fortunate Sarasvatī given me ? Or O Citra ! you have given me.

18 : King Citra who lived on the banks of Sarasvatī gave us enormous riches.

ix. 5. 8 : May Bhāratī, Sarasvatī and Ilā come at the sacrifice.

67. 32 : He who reads these *ślokas* gets from Sarasvatī clarified butter, milk and water.

81. 4 : May the well-formed Sarasvatī come here with Puṣā, Mitra, Varuṇa, Maruts, and Aśvins.

x. 19. 7 : May Sarasvatī fulfil the desires of the charitable men.

8 : Sarasvatī drives with our forefathers in the same chariot. May she grant us food and freedom from disease.

9 : May you bestow the worshipper food and riches in large quantities.

10 : The waters are like our mother, may the water cleanse us. I am coming out of the water pure and free from sin.

30. 12 : O Waters ! complete this beneficial sacrifice. Be the protector of sons and riches. May Sarasvatī grant food to the poet.

64. 9 : May Sarasvatī, Sarayu and Sindhu rivers come to protect us. Like mothers, may these goddesses give us water, sweet as honey, and unctuous and nourishing as clarified butter.

65. 1 : Sarasvatī is mentioned with other gods, Indra, Varuṇa, Rudra, Viṣṇu, etc., as united together.

13 : May Sarasvatī, with whom are linked various ideas and thoughts, hear my words.

75. 5 : O Ganges ! O Yamunā, Sarasvatī, Śatadru (Sutlej) and Paruṣṇi (Irāvatī) ! divide among yourselves the psalms uttered by me.

110. 8 : May Bhāratī, Ilā and Sarasvatī come and sit on the Kuṣa grass.

131. 5 : Sarasvatī is said to have waited upon Indra (Vaj. S. x. 34) when he was rescued by Aśvins.

141. 5 : Pray Aryyamā, Indra, Viṣṇu, and Sarasvatī for food.

184. 2 : O Sinīvālī, O Sarasvatī ! hold the embryo. May Aśvins produce a fœtus.

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RĀKĀ, SINĪVĀLĪ, GUÑGŪ, AND ANUMATI.

Rākā (ii. 32. 4. 5. 8; v. 42. 12), Sinīvālī (ii. 32.6; x. 184. 2), Guñgū (whom Sāyaṇa, in ii. 32. 8. identifies with Kuhū) and Anumati are four goddesses, besides Sarasvatī, mentioned in the Ṛgveda in connection with medicine. "Sāyaṇa says: Rākā is the full moon (ii. 32. 4) but she is closely connected with parturition, as she is asked to 'sew the work' (apparently the formation of the embryo) 'with an unfailing needle,' and to bestow a son with abundant wealth (ii. 32. 4). Sinīvālī and Kuhū are (as we are told by Yāska, Nir. xi. 31) wives of the gods according to the mythologists (nairuktāḥ) and the two nights of the new moon (amāvāsye) according to the ritualists (याज्ञिकाः). Sinivālī being the earlier, and Kuhū the later. Sinīvālī however is also connected with parturition, being called पृथुष्टुका, 'the broad-loined' (or 'bushy-haired'), वहुसूवरी, 'the prolific,' सुवाहु, 'the handsome-armed," स्वङ्गुरि, "the handsome-fingered," being supplicated for progeny ii. 32. 6.7 (प्रजाम् देवी दिदिड्ढि नः), and asked to bestow pregnancy, x. 184, 2 (गर्भम् धेहि सिनिरवाली); A. V. v. 25. 3; vi. 11. 3. Yāska quotes from the Taitt. Br., iii. 3. 11, a verse regarding Kuhū, whose name does not occur in the Rig-veda. See also the account of Anumati in Böhtlingk and Roth's Lexicon, *s.v.*"[1]

"In a hymn to Anumati (according to Professor Roth the goddess of good will, as well as of procreation), A. V. vii. 20, she is thus identified with all things (verse 6): 'Anumati was all this universe, whatever stands or walks, and everything that moves. May we, O goddess,

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[1] Muir Texts, Vol. V, p. 346. See also Weber's Ind. Stud., v. 228 ff and 237.

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enjoy thy benevolence; for thou, Anumati, dost favour us."[1]

The following hymns in the Ṛgveda are addressed to the goddesses:

ii. 32. 4: May auspicious Rākā hear. May she sew her work with an infallible needle, and grant us wealthy and heroic sons.
5: May gracious Rākā approach us to-day. She nourishes us with thousand blessings.
6: Wide-hipped Sinivālī, the sister of the gods, grant us progeny. (=Y.V., 34. 10).
7: Sinivālī is said to have beautiful arms, nice fingers, many children, and to have delivered many women easily.
8: I invoke Guṅgu, Sinivālī, Rākā, Sarasvatī; Indrāṇī and Varuṇāṇī for welfare.
v. 42. 12: See p. 116.
x. 184. 2: See p. 119.

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[1] Muir: Sanskrit Text, Vol. V, p. 398.

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CHAPTER III

DAKṢA

Dakṣa sprang from Aditi, and Aditi came forth from Dakṣa. After her the gods came into being, (x. 72. 4. 5). Certain luminous gods are said to be the sons or descendants of Dakṣa, (vi. 50. 2). Roth (Illus. of Nirukta, p. 51) interprets Dakṣa as the spiritual force and Aditi as the spaces. Dakṣa's wife is Prasuti, the mother of Satī who married Śiva. Dakṣa celebrated the famous sacrifice, the Dakṣa-Yajña, in which all the gods except Śiva were invited. To punish her father, Satī went to the sacrifice, and when Dakṣa proceeded with his Yajña without Śiva, she gave up her life. To avenge her death, Śiva sent Vīrbhadra; and a struggle ensued, in which Dakṣa's head was severed from his body. It was afterwards substituted by a goat's head, when Śiva's wrath was pacified by prayer. The sacrifice was completed with a share assigned to Śiva. In iii. 27. 10, Ilā is the daughter of Dakṣa; she married Rudra.

Dakṣa is called the Prajāpati, *i. e.*, the creator of living beings. He is one of the Ādityas (ii. 27. 1) who were six (ii. 27. 1) or seven (ix. 114) or eight (x. 72. 8) in number in the Ṛgveda but more in later literature (Śatap. Br., ii. 6. 3. 8; Mbh., Ādiparva, 121). Brahmā taught him the Science of Medicine. Dakṣa was the teacher of the two Aśvins, the twin sons of the sun.

ब्रह्मा प्रोवाच ततः प्रजापतिरधिजगे तस्मादश्विनावश्विभ्यामिन्द्र इन्द्रादहं मयात्विह प्रदेयमर्थिभ्यः प्रजाहितहेतोः ।

Suśruta Saṁhitā, I. i.

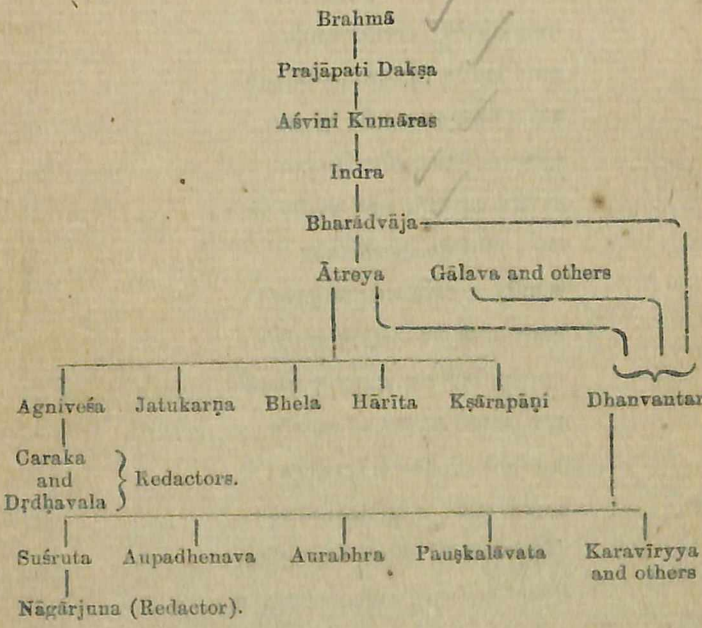
ब्रह्मा स्मृत्वायुषो वेदं प्रजापतिमजिग्रहत् ।
सोऽश्विनौ तौ सहस्राक्षं सोऽत्रिपुत्रादिकान् मुनीन् ॥

Aṣṭāṅga Hṛdaya Saṁhitā, I. i.

विधाताऽथर्व्वं सर्व्वस्वमायुर्व्वेदं प्रकाशयन् ।
स्वनाम्ना संहितां चक्रे लक्षश्लोकमयी मृजुम् ।
ततः प्रजापतिं दक्षं दक्षं सकल कर्म्मसु ॥
विधिर्धीनीरधिं साङ्गमायुर्व्वेदमुपदिशत् ॥
अथ दक्षः-क्रियादक्षः स्वर्व्वैद्यौ वेदमायुषः ।
वेदयामास विद्वांसौ सूर्य्यांशौ सुरसत्तमौ ॥

Bhāva Prakāśa, I. i.
See also Caraka Saṁhitā, I. i.

GENEALOGY OF THE TEACHERS OF MEDICINE.



The resemblance of Æsculapius (the reputed son of Apollo) and his two sons Machaon and Podalarius, to Dakṣa, the preceptor of the two Aśvins, the offspring of the sun, who after learning the Āyurveda from their father became the medical attendants of the gods, is no doubt very remarkable.

Formulæ attributed to Dakṣa :—

I. Mahārāsnādikvātha—Prajāpati—B. P., II, ii, p. 587.

1. MAHĀRĀSNĀDI KVĀTHA.

महारास्नादि क्वाथः ।

रास्नावातारिमूलञ्च वासकञ्च दुरालभम् ।
शटीदारुबलामुस्तनागरातिविषाभयाः ।
श्वदंष्ट्राव्याधिघातश्च मिसिधान्यपुनर्न्नवाः ।
अश्वगन्धामृताकृष्णा वृद्धदारशतावरी ।
वचा सहचरश्चैव चविकाबृहतीद्वयम् ।
समभागान्वितैरेतै रास्नाद्विगुणभागिकैः ।
कषायं पाययेत् सिद्धमष्टभागावशेषितम् ।
शुण्ठीचूर्णसमायुक्तमाभाद्येन युतं तथा ।
अलम्बुषादिसंयुक्तमजमोदादिसंयुतम् ।
यथादोषं यथाव्याधि प्रक्षेपं कारयेत् भिषक् ।
सर्व्वेषु वातरोगेषु सन्धिमज्जगतेषु च ।
आनाहेषु च सर्व्वेषु सर्व्वगात्रानुकम्पते ।
कुब्जके वामने चैव पक्षाघाते तथार्द्दिते ।
जानुजङ्घास्थिपीड़ासु गृध्रस्यां च हनुग्रहे ।
प्रशस्तं वातरक्ते स्यादूरुस्तम्भे तथार्शसि ।
विश्वचीगुल्महृद्रोगविसूचीक्रोष्टुशीर्षके ।
अन्त्रवृद्धौ श्लीपदे च योनिशुक्रामये तथा ।
पुंसां मेढ्रगते रोगे स्त्रीणां वन्ध्यामये तथा ।
योषितां गर्भदं मुख्यं नास्ति किञ्चिदतः परम् ।
सर्व्वेषां पाचनानान्तु श्रेष्ठमेतद्धि पाचनम् ।
महारास्नादिकं नाम प्रजापतिविनिर्मितम् ॥

इति महारास्नादि क्वाथः ।

YAMA

Yama or the Indian Pluto in the Veda is the god and ruler of the dead. He is the son of Vivasvat (Rv., ix. 113. 8; x. 14. 1 (=Av., viii. 2. 11; xviii. 1. 49); x. 14. 5; 58. 1; 60. 10) and Saraṇyū, the immortal daughter of Tvaṣṭa (Rv., x. 17. 1. 2). He is said to have been one of the original pair of human beings (x. 10. 2) and to have sprung from the Gandharva, a deity of the atmosphere, and his wife Āpyāyoni (x. 10. 4). In the same hymn to perpetuate the human race, his twin sister is said to have requested him for cohabitation. But he is declared to have resisted the solicitations of his twin sister Yamī or Yamunā to form a sexual union with her for the continuation of the species (Roth, Journ. German Orient. Soc., iii. 335; iv. 426; Illustr. of Nirukta, p. 138). He was the first of mortals who died and discovered the way to the other world; he guides other men thither, and assembles them in a home for ever (x. 14. 1. 2; Av., vi. 28, 3; xviii. 1. 49. 50; 3. 13). In the Taitt. S., vi. 1. 4. 3, it is said: "The gods and Yama contended in this world. Yama took away the vigour and energy of the gods. This is his characteristic. The gods reflected, 'Yama has become the same as we are.' Müller thinks that Yama's character is solar. Sun also is the son of Vivasvat and like Yama he is sometimes considered as sending death (Rv., viii. 67. 20: see also Av., xix. 9. 7; xviii, 3, 62); he is sometimes spoken of as preserving from Yama (Rv., i. 116. 2; vii. 33. 9; ix. 68. 3. 5; x. 12. 6; 13. 2. 4; 53. 3; 64. 3; 123. 6). In Śatap. Brāhma., 109, Yama is identified with the sun (xiv, 1, 3, 4); but he is, a little further on (xiv, 2, 2, 11) similarly identified with Vāyu.

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Max Müller understands Vivasvat to represent the sky, Saraṇyu the dawn, Yama originally the day, and Yamī, the twin sister, the night. They are identified by some with the first human pair; and another hymn says that he "was the first of man that died." He had two dogs as his messengers (Av., v. 30. 6; viii. 1. 9; 2. 11; 8. 10); one of them is said to be black and the other spotted (x. 14. 10-12). In i. 29. 3, his two female messengers are referred to, and Indra is prayed to cast them asleep. In x. 165. 4 and Av., vi. 28. 3, Yama is identified with death and a bird is said to be the herald of approaching death of animals.

In the Ṛgveda Yama is nowhere represented as the punisher of the wicked, an idea very much dilated upon in later times. But his insatiable dogs are no doubt objects of terror, and in x. 97. 16, deliverance is prayed from the bonds of Yama and Varuṇa.

In the Mahābhārata he is the son of Sun by Saṁjñā, and the brother of Vaivasvata Manu, and mythologically, the father of Yudhiṣṭhira. He is the judge of the dead. For the Pauranic legend of Yama and his step-mother Chāyā, see page 84.

In the Vedic hymns, Yama is never said to have been a physician. He sends death and is the King of the departed. In his abode, the virtuous enjoy blessedness after death.

According to Barnouf, the powerful King Jamsid, Ferudin and Garsaspa as mentioned by the celebrated Persian poet Firdusi are the same as Yim, Thrateyana and Keresaspa of the Zend Avesta; and these names are again to be traced to the Ṛgvedic gods: Yama, Traitana and Kṛśaśva.

Books—

Jnānārṇava: Yamarāja is said to have written a book on medicine called Jnānārṇava (or the Sea of

Knowledge). It is mentioned in the Brahmavaivarta Purāṇa. There is also a Dharma Sāstra which bears the name of Yama as its author.

Hymns relating to Yama in the Ṛgveda :—

x. 10, 1-14; 14, 1-16 (=Av., xviii. 1, 49; Nir. x. 20) 15. 1. (=V.S., 19. 49; Nir., 11. 18); 17. 12.

x. 10. 1-14 : The famous hymn by Yama and his sister Yamī in the form of a dialogue about cohabitation between brothers and sisters.

14. 1. Adore Yama, the son of Vivasvān. He takes the pious to the happy land. All men go to him.
2. Yama points out the way in which our forefathers went.
3. Yama is magnified by the help of the Aṅgirās as Indra by the Kavyas.
4. O Yama! take your seat with the Aṅgirās in this sacrifice.
5. Come with the Aṅgirās. We invoke Vivasvat, your father.
6. Our forefathers Aṅgirā, Atharvans and Bhṛgu have come; may they bless us.
7. You go to the way of our forefathers; go to King Yama and Varuṇa.
8. Go to heaven and live in the company of our forefathers and Yama. Leave evil there and return home.
9. Yama has fixed this cremation ground for the dead.
10. Pass by the two dogs in haste and live in company of the fathers and Yama.
11. O Yama, protect this dead man from your dogs who guard the way. O King! make him fortunate and free from disease.

12. Those two insatiable messengers have big noses; may they give us strength: may we see the sun.

13. Prepare Soma for Yama, and for him make oblations. The sacrifice goes towards him.

14. Adore Yama; may he grant us long life.

15. Offer oblations for Yama. We adore the sages who showed us the right path.

16. Yama gets Trikadruka sacrifices.

17. 1: The god Tvaṣṭā gave her daughter in marriage. When Yama's mother was married, the wife of Vivasvān disappeared.

2. The immortal Saraṇyu was concealed from men, and a lady like her was given to Vivasvān; she conceived the two Aśvins; and Saraṇyu gave birth to twins.

VARUṆA.

Varuṇa, the son of Aditi (i, 24, 15), the god of the ocean in later mythology, is not so described in the Ṛgveda. He rather occupies a more conspicuous place but his connection with water can distinctly be traced in the Vedic literature (Ṛv., i, 161, 14; ii, 28, 5; vii, 49, 2-4; 64, 2; viii, 41, 8; 58, 12; ix, 90, 2; V. S., x, 7; Av., iii, 2, 3; iv, 15, 12; 16, 3; v, 24, 4; vii, 83, 1). He is frequently associated with Mitra in the hymns of the Ṛgveda as the ruler of earth and skies (v, 62, 3; 63, 7; 67, 5; 69, 1, 4; vii, 61, 4; x, 102, 2); as the guardians of the world (ii, 27, 4; v, 62, 9; vii, 51, 2; viii, 25, 1; x, 126, 4); as martial gods (i, 25, 5; 124, 6; 136, 1; v, 66, 2; 67, 1; 68, 1, 3; vi, 49, 1; 51, 10; 67, 5, 6; viii, 84, 11; 64, 2; viii, 25, 8; 56, 1; 90, 2); as Rudra, the terrible (v, 70, 2, 37); as Asura, the divine (viii, 25, 14; 27, 20; 36, 2; vii, 65, 2); and as the universal monarch (i, 71, 9; 136, 14; 137, 1; v, 62, 6; 63, 2, 3, 5; 65, 2; 68, 2; vii, 64, 2; viii, 23, 30; 25, 4, 7, 8; 90, 2; x, 65, 5). They are described as the righteous (i, 2, 8; 23, 15; 36, 4; ii, 27, 4; v, 63, 1; 65, 2; 67, 4; vii, 64, 2; 66, 13; viii, 23, 30; 25, 8), the lords of truth (i, 23, 5) and haters of falsehood (i, 152, 1; ii, 27, 4; vii, 60, 5; 66, 13). They discharge the rain (v, 62, 3), cause the sky to shine (x, 65, 5) and help the foolish to be wise (vii, 60, 6, 7).

Varuṇa is also separately magnified many times, (ii, 27; 28; v, 85; vii, 86; viii, 27, 7; 41; 42, 1-2; x, 61, 26), but Mitra only once (iii, 59). Sāyaṇa expresses the opinion that Mitra is the god of the day (i, 89, 3) and Varuṇa is the setting sun (vii, 87, 1;—Sāyaṇa[1]) or the god of the night

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[1] मैत्रं वै अहरिति श्रुयते: श्रुयते च वारुणी रात्री।
Sāyaṇa.

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(Taitt. Br., i. 7, 10 ; Taitt. Saṁ., i, 18, 16 ; ii, 1, 7, 4 ; vi, 4, 8). According to Śatapatha Br., this earth is Mitra and the heaven is Varuṇa. The Vedic Mitra is identified with the Mithra (Windischman) and the Asura Varuṇa with the Ahura Mazda (Roth) or Varena (Westergaad) of the Zend Avesta. The Varuṇa corresponds in name to the Uranos of the Greeks.

Varuṇa is sometimes said to be visible to the worshippers (i, 25, 18 ; vii, 88, 2) in this world, and in the next he and Yama shall be beheld by the pious after death (x, 14, 7). He is said to be the highest god of the Aryan races (Jour. Germ. Or. Soc., vi, 71)

The far sighted (i, 25, 5, 16 ; viii. 90, 2), thousand-eyed (vii, 34, 10) Varuṇa lived in a house which had thousand doors (vii, 88, 5) and thousand columns (ii, 41, 5 ; v, 62, 6). Dressed in golden mail (i, 25, 13), and seated in his chariot drawn by horses (v , 62, 8), Varuṇa beholds all things around him (v, 62, 4, 8 ; 63, 1). His golden-winged messengers (i, 25 ; x, 123, 6) behold both worlds (i, 24, 13 ; vi, 67, 5 ; vii, 87, 13). The sun-eyed (vii, 66, 10 ; 61, 1 ; 63, 1 ; x, 37, 1) and beautiful-handed god is the King or King of kings (i, 24, 7, 8 ; 25, 10 ; ii, 27, 10 ; 28, 1, 6 ; iv, 1, 2 ; v, 40, 7 ; 85, 1, 3 ; vi, 68, 9 ; vii, 42, 1 ; 64, 1 ; 87, 6 ; x, 103, 9 ; 132, 4 ; 173, 5). He is the source of knowledge and dwells everywhere as a ruler (v, 85, 2 ; vi, 70, 1 ; vii, 86, 1 ; 87, 5, 6 ; viii, 41, 4, 5, 10 ; 42, 1 ; 87, 5). Wind is his breath (vii, 87, 2). Rivers flow by his command (i, 24, 8 ; ii, 28, 4 ; vii, 87, 1). The moon and stars obey him (i, 24, 10) and he opens out paths for the sun (vii, 70, 4). He knows the flight of birds in sky, the path of ships in ocean, and the course of wind (i, 25, 7), but he is unknown to birds and the rivers (i, 24, 6). His laws are fixed (i, 25, 6, 10 ; 44, 14 ; 141, 9 ; ii, 1, 4 ; 28, 8 ; iii, 54, 18 ; viii, 25, 2). He instructs

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Vaśiṣṭha in mysteries (vii, 87, 4), who claims his friendship (viii, 88, 4), implores his forgiveness and entreats for his life. He is the possessor of divine wisdom or māyā (iii, 61, 7; v, 63, 3, 4, 7; vi, 48, 14; vii, 28, 4; x, 99, 10; 147, 5).

Varuṇa is said to have a hundred, a thousand medicines as remedial agents (i, 24, 9), and he is the guardian of immortality (viii, 42. 2). He is prayed for to drive away evil and sin (i, 24, 9; v, 85, 7, 8), to prolong life (i, 24, 11; 25, 12) and spare the lives of transgressors of his laws (i, 25, 1), though they are liable to punishment by his noose (i, 24, 5; 25, 21; vi, 74, 4; vii, 65, 3; 84, 2; x, 85, 24; Av., iv, 16, 6). "From dire disease preserve us free" is the prayer of the Vedic Ṛṣi to Varuṇa. It is said that he, who constantly sings the hymn 'Uduttamaṁ Varuṇa pāśam" never suffers from any disease. He gets himself cured of disease, if he recites this sāma:

उदुत्तमं वरुणपाशमित्येतत् सदा प्रयुञ्जानः सम्बाधं न निगच्छति निगतश्च प्रमुच्यते।

Sāmavidhāna Brāhmana, II. I.

Ea or Oannes was the earliest (5,000 B. C.) known Sumerian deity associated with the art of healing. He was called the "Lord of the Deep." "He arose from the sea and instructed the people in science and learning." As god of the sea, he is credited with certain healing powers, from which the sick may derive benefit by bathing in the sea. His son Marduck, the chief Babylonian deity of healing was believed to give health and to punish men with disease through the medium of the heavenly bodies. He is said to afflict the guilty with dropsy. The following verses refer to the power of the god to inflict disease on the guilty and to restore the dead to life:

"O Marduck, thou art glorious among great gods,
No will is greater than thine,

Thou canst inflict upon the guilty one
A dropsy which no incantation can cure,
Thou art the marvellous one who taketh pleasure
In raising the dead to life (*i.e.,* the healing of the sick)
Marvellous one who hath power to give life
By thy spells the sick are restored."

In the Ṛgveda, i, 24, Varuṇa is described as giver of long life. In vii, 86-89, the short final hymn alludes to the power of Varuṇa to cure dropsy. Varuṇa as a water-god inflicts on man dropsy as a punishment for their sin. (*Cf.* the story of Dogstail Śunaśepha, wherein King Hariścandra is said to have been attacked with the desease.)

The idea that dropsy was caused by the wrath of Varuna might have originated from the common belief still prevalent in India, and once fully believed in England, that "dropsy could be caused by drinking too much water and that a patient suffering from dropsy contracted the distemper by drinking too much water."[1]

The following epithets are applied to Varuṇa in the Ṛgveda:

Asura (i, 24, 14; ii, 28, 7; 27, 10; iv, 63, 3, 7; v, 85, 5).
Praceta (i, 24, 14).
Āditya (v. 69, 4).
Rudra (v. 70, 2).
Sukṣatra (vii, 89, 1-4).
Deva (vii, 60, 52; 61, 7; viii, 42, 3).
Rājā (vii, 89, 1).
Kṣatriya (vii, 64, 2).

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[1] B. M. J., 1888, Vol. II, p. 1275-6.

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In the following hymns Varuṇa is invoked with other god in the Ṛgveda:

Indra and Varuṇa: see p. 105.

Mitra and Varuṇa: i, 129, 3; 136; 137; 151; 152; 153; iii, 62, 16-18; v, 41, 1; 52, 14; 62; 63-72; vi, 67; vii, 40, 2; 50, 1; 52, 2; 60, 5-12; 61; 62; 63, 5, 6; 64; 65; 66, 1-13; viii, 29, 9, 10; 47, 1; 101; x, 61, 25; 132.

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THE AŚVINI KUMĀRA.

In the Ṛgveda the Aśvins are described as the twin sons of Vivasvat and Saraṇyu (x, 17. 2). They are also called the sons of sky (i. 7, 12; 84, 1; 182, 1; x. 61, 4) or the offspring of the ocean (i, 46, 2). Uṣā is their sister (i, 180, 2) and Urjānī (i, 119, 2) or Sūryā, the daughter of the sun, their wife (i, 116. 17; 117, 13; 118, 5; 119, 5; iv, 40. 6; v, 73, 5; vi, 63, 5; 68, 3; 69, 3, 8; vii, 68, 3; 69, 4; viii, 8, 10; 35; x, 39, 11; etc). They are named conjointly Nāsatya (i, 116, 1, 2, 4, 9, 10, 11, 14, 17, 19, 20, 23) and Dasra;—but these names in later times became the names of the two Aśvins respectively. Now who were these Aśvins? Yāska, the oldest commentator, in the Nirukta, thus remarks:—

तत् कौ अश्विनौ। द्यावा पृथिवी इति एके। अहोरात्रौ इति एके। सूर्यचन्द्रमसौ इति एके राजानौपुण्यकृतौ इति ऐतिहासिकाः। तयोःकाल ऊर्द्धमर्द्धरात्रात् प्रकाशितव्यस्य अनुविष्टम्भमनु।

"Next in order are the deities whose sphere is the heaven; of these the Aśvins are the first to arrive. They are called Aśvins because they pervade everything, the one with moisture and the other with light. Aurṇabhāva says they are called Aśvins, from the horses. Who then are those Aśvins? 'Heaven and earth' say some; 'Day and Night' say others; 'The Sun and Moon' say others; 'Two Kings, performers of holy acts' say the legendary writers. Their time is subsequent to midnight, whilst the manifestation of light is delayed. The dark portion denotes the intermediate (god=Indra?), the light portion Āditya (the Sun)."[1]

Roth following the remarks of Yāska, identifies the two Aśvins with Indra and the Sun; but this identification is unwarranted for Durgā the commentator on Yāska never attributes to the latter the view which Prof. Roth ascribes to him.

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[1] Muir: Sanskrit Texts, Vol. V., p. 234.

The Aśvins are long armed (i, 3, 1), swift handed (i, 3, 2) gods who are ever young (vii, 67, 10; 69, 8) and know no old age (i, 112, 9; 116, 20). They are powerful gods (i, 3, 2) who go to all directions (i, 4, 6, 14), perform various deeds (i, 3, 2), and know everything (i, 120, 2). They are of terrific paths (i, 3, 3) and for them the Ṛbhus made a car which goes everywhere (i, 20, 3; x, 39, 12). This golden car (i, 92, 18; 129, 4; v, 75, 3; 77, 3; viii, 5, 29) was triangular in shape (i, 34, 12; 47, 2), and had three wheels (i, 34, 2, 5, 9, viii, 8, 23) and three columns (i, 34, 2; 47, 2; 118, 1, 2; 157, 3). It was drawn by horses (i, 116, 17; 118, 5; 119, 1, 5; 157, 6; 158, 3; 180, 6; iii, 50, 2-3; iv, 45, 4-7; vii, 69, 1; viii, 5, 7) who were called Hạri (i, 181, 5) or by asses (i, 34, 9; 116, 2; Nighantu, I, 14) which were whipped (i, 22, 3); sometimes the car was drawn without any horse (i, 112, 12; 120, 10) or with Gangetic porpoise and ass (i, 116, 18). They had a ship with a hundred oars (i, 116, 5). They are the gods of cure (i, 92, 18; viii, 8, 19) and they know the earthly, the aerial, and the heavenly medicines (i, 34, 6). They performed many wonderful cures which are related elsewhere. They drink soma for pleasure (i, 46, 12) and sound conchshell as they travel in their car.

In some passages in the Ṛgveda the Aśvins, like the Ṛbhus, are described as men नरौ (i, 3, 2; 180, 4; 182, 8). Evidently they were men, skilled in surgery and horsemanship. Goldstucker takes the same view and I quote his remarks from Muir's Sanskrit Texts, Vol. V., p. 255.

"The myth of the Aśvins is, in my opinion, one of the class of myths in which two distinct elements, the

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cosmical and the human or historical, have gradually become blended into one.......... The historical or human element in it, I believe, is represented by those legends which refer to the wonderful cures effected by the Aśvins, the cosmical element is that relating to their luminous nature. The link which connects both seems to be the mysteriousness of the nature and effects of the phenomena of light, and of the healing art at a remote antiquity. That there might have been some horsemen or warriors of great renown who inspired their contemporaries with awe by their wonderful deeds, and more especially by their medical skill, appears to have been the opinion of some old commentators mentioned by Yāska, for some 'legendary writers' he says, took them for 'two kings, performers of holy acts;' and this view seems likewise borne out by the legend in which it is narrated that the gods refused the Aśvins admittance to a sacrifice on the ground that they had been on two familiar terms with men."

I may add that the cures performed by the Aśvins as described in the Ṛgveda do not always partake of a supernatural character; those cures can be performed by mortal surgeons. Many of the deeds attributed to them are of the more ordinary of medical practice. As regards the myth of their birth, developed in later times, see Bhāskara. (Also Ṛv., 10, 7, 2).

The Aśvins bear some resemblance to Chiron the Centaur who was very famous for his knowledge of medicine. The herb which healed Chiron's wounds bore the name of Centauay after him. Like the Aśvins, he is said to have taught his knowledge of simples to Aesculapius, to Hercules, to Aristes and other Greek heroes. The Centaurs were the wild inhabitants of Thessaly. They were skilful horse tamers and riders, and from this Chiron is said to have the form of half man and half horse. We think that the legend of Saraṇyu and Vivasvat who assumed the form of horses might have similar origin. Max Müller expresses the same opinion: "The legend of the Saraṇyu and Vivasvat assuming the form of horses may be meant simply as an explanation of the name of their children, the Aśvins."[1]

The Aśvin twins bear some physical resemblance to Castor and Pollux, 'the two handsome, beautiful young men that ride upon white horses.' They are the twin sons of Jupiter and Leda. She was the wife of Tyndarus, King of Laconia, whom Jupiter loved. Castor was a horse tamer, and Polydeuces (Lat. Pollux), the master of the art of boxing. Like the Aśvins they fought many battles, but they had no knowledge of medicine.

In the recent excavations at Boghaz Koyi in Cappadocia in North-Western Mesopotamia, Winckler discovered in certain documents in cuneiform character names of four Vedic gods, *viz.*, Mitra, Varuṇa, Indra and Nāsatyas or the Aśvins, among other gods worshipped by the Kings of Mitani in the Euphrates Valley about 1600 B.C. It is possible that "these tribes, being neighbours and perhaps subjects of Vedic tribes who had reached a higher level of civilization, adopted the Vedic gods, and thus brought the Vedic worship with them to their new homes in Mesopotamia".[2] It is said that even the Mitanian Kings coined their names from the ancient Vedic language.[3] In the Zend Avesta Nāsatya assumes the name Nauṅghaithya.

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[1] Science of Language (1882), Vol. II, p. 530.

[2] J. R. A. S., p. 726, 1909.

[3] Roger: History of Babylon, Vol. I, p. 110.

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INCIDENTS OF THEIR LIFE.

The following legends are mentioned in the Ṛgveda :—

(1) When the sage Cyavana became old and decrepit, he was restored to youth and beauty, and was made acceptable to his young wife Sukanyā, daughter of Śaryyāti (i, 116, 10 ; 117, 13 ; 118, 6 ; v, 74, 5 ; vii, 68, 6 ; 71, 5 ; x, 39, 4).

(2) They restored Viṣṇāpu to his father Viśvakāya, the son of Kṛṣṇa (i, 116, 23 ; 117, 7 ; vii, 86, 3 ; viii, 86 ; x, 65, 12).

(3) They rendered the old Kali young who gained his wife (i, 112, 15 ; x, 39, 8).

(4) They brought to Vimada, the bride Kamadyū, also called Śundhyuva, the beautiful daughter of Purumitra (i, 112, 9 ; 116, 1 ; 117, 20 ; x, 39. 7 ; 65. 12).

(5) They favoured Bhujyu, son of King Tugra and bore him home on their ships when he was left in the middle of the sea (i, 112, 6, 20 ; 116, 3, 4, 5 ; 117, 14, 15 ; 118, 6 ; 119, 4, 8 ; 158, 3 ; 180, 5 ; 182, 5-7 ; vi, 62, 6 ; vii, 68, 7 ; 69, 7 ; viii, 5, 22 ; x, 39, 4 ; 40, 7 ; 65, 12 ; 143, 5).

(6) When Viśpalā's leg was severed in battle, they substituted an iron leg instead (i, 112, 10 ; 116, 15 ; 117, 11 ; 118, 8 ; x, 39, 8).

(7) They cured Ṛjrāśva of his blindness, inflicted as a punishment by his father (i, 112, 8 ; 116, 16 ; 117, 17 ; 120, 6).

(8) They restored Parāvṛja, who was blind and lame, to sight and power of locomotion (i, 112, 8).

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(9) They raised and revived the Ṛṣi Reva who was bound and drowned in a well (i, 112, 5 ; 116, 24 ; 117, 4,12 ; 118, 6 ; 119, 6 ; x, 39, 9).

(10) Vandana was raised by them out of a pit and restored by them to youth from decrepitude (i, 112, 5 ; 116, 11 ; 117, 5 ; 118, 6 ; 119, 6, 7 ; x, 39, 8).

(11) They bestowed wisdom on Kakśīvān, of the Prajra dynasty, made him young and caused wine and honey to flow forth from their horses' hoofs (i, 116, 7 ; 117, 6 ; x, 143,1).

(12) Delivered Atri and his companions from a gloomy abyss, where they were thrown by evil spirits (i, 112, 7, 16; 116, 8; 117, 3; 118, 7 ; 119, 6; 180, 4; v, 78, 4; vii, 71, 5; viii, 5, 25; 73, 3, 78; x, 39, 9, 40, 7); and gave him food and made him young (x, 147, 1).

(13) In response to Vadhrimatī's invocations, they gave her a son called Hiraṇyahasta and delivered her with ease (i, 116, 13 ; 117, 24 ; vi, 62, 1 ; x, 39, 7 ; 65, 12).

(14) They cured princess Ghoṣā, the daughter of Kākṣivāna, of her leprosy and gave her a husband even when she became an old maiden (i, 117, 7, 19 ; x, 39, 3, 6 ; 40, 5, 9). Her son Suhasti praised them (i, 120, 5).

(15) They caused the cow of Śayu, who had left off bearing, to yield milk. (i, 112, 3 ; 116, 22 ; 117, 20 ; 118, 8 ; 119, 6 ; vi, 62, 7 ; vii, 68, 8 ; x, 39, 13).

(16) They gave Pedu a swift white horse which overcame his enemies (i, 116, 6 ; 117, 9 ; 118, 9 ; 119, 10 ; vii, 71, 5 ; x, 39, 10).

(17) They helped Indra (x, 131, 5) and other persons (i. 112 ; 116 ; 117 ; 118 ; 119) and rescued from the jaws of a wolf a quail (i, 112, 8 ; 116, 14 ; 117, 16 ; 118, 8 ; x, 39, 13).

(18) They cured Kakṣivat of blindness and deafness (i, 116, 120 ;) and sage Śroṇa of his weak knees (i, 112, 8).

(19) The Aśvins also gave sight to Kaṇva (i, 117, 8 ; 118, 7 ; viii, 8, 20), and the power of hearing to the son of Nṛṣada (i, 11, 7, 8).

(20) Delivered Vāmadeva from his mother's womb (i, 119, 7).

(21) They killed the son of Viṣāṅ Asura with poisoned arrow (i, 117, 16) ; with Indra killed Pṛthuśravā's enemy (i, 116, 21) ; killed Śamvara for Divodāsa (i, 112, 14) ; also killed Pani (i, 184, 2).

(22) Sāved Rājarṣi Antaka, Karkandhu, Vayya (i, 112, 6), Pṛśaṅgi, Purukutsa (i, 112, 7), Kutsa, Naryya, Śrutaryya (i, 112, 9 ; x, 40, 6), Veśa, son of Aśva (i, 112, 10), Kākṣīvān, son of Uśija (i, 112, 11) Māndhāta (i, 112, 13), Bharadvāja (i, 112, 13 ; 117, 11), Vamra, Pṛthi who was without horse (i, 112, 15), Śayu (i, 112, 16 ; vii, 68, 8), Manu, sage Syūmaraśmi (i, 112, 16), Śaryyāta (i, 112, 17), Adhrigu (i, 112, 20 ; viii, 22, 10), Kṛśānu (i, 112, 21), Kutsa, son of Arjjuna ; Turbīti, Dabhīti, Dhvasanti and Puruṣanti (i, 112, 23), King Jāhuṣa when surrounded by enemy (i, 116, 20 ; 117, 16 ; vii, 71, 5), Vaśa (i, 116, 21 ; viii, 8, 20 ; x, 40, 7), Dīrghatamā, son of Mamatā, from fire and water against Traitana (i, 158, 4-6) ; Priyamedha (viii, 5, 25), Medhātithi, Daśabraja, Gośaryyā, (viii, 8, 20) ; Tryasdasyu (i, 112, 14 ; viii, 8, 21), Takṣi, Paktha (viii, 22, 10), Uśanā, (x, 40, 7) ; Kṛśa (i, 112, 14 ; 7, 40, 8) ; Śvaiyuva (x, 40, 8), and Kanva (viii, 5, 25).

(23) Learned Madhuvidyā[1] from Dadhici son of Atharvā whom they supplied with a horse's head (i, 116,

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[1] According to Sāyaṇa Madhuvidyā, also called Apikakṣa is the science of re-uniting the severed head with the trunk : छिन्नस्य य शिरसः कबन्धप्रदेशेन पुनः सन्धानभूतं प्रवर्गविद्याख्यं रहस्यं—Sāyaṇa (i, 117, 22).

10. AMṚTA OIL.

अमृत-तैलं नाम ।

सत्यवागश्विनौ देवौ भिषजौ देवपूजितौ ।
× × × परमे—+ तैलम् पुष्टि विवर्द्धनम् ॥
सर्व्वव्याधि प्रशमनं राजार्हममृतोपमम् ।
अमृतन्नाम विख्यातं तैलं बलकरं नृणाम् ॥
सुभूमौ मधूकं जातमुद्धरेत् कृतमङ्गलः ।
पुष्येण प्रयतो विप्राय स्वस्तिवाच्य समासतः ॥
ग्राहयेत् स्वरसं तस्य चतुष्पात्रम् विचक्षणः ।
प्रपौण्डरीकममृताम् विसग्रन्थिं शतावरीम् ॥
शृङ्गाटकान्यामलकानुदुम्बरकशेरुकाः ।
क्षीरिणाम् चैव वृक्षाणाम् त्वचानि स्यु पृथक् पृथक् ॥
कुशकाशेक्षुमूलानि शरवीरणयोस्तथा ।
गुद्राणाम् नाड़िकाणाम् च मूलम् क्रौञ्चानदानि च ॥
बदरीश्च विदारीश्च वेतसं साडुरूषकम् ।
निम्बशाल्मलिखर्ज्जुरनाडिकेर प्रियङ्गवः ॥
पटोलं कुटजं द्राक्षां सप्तपालम् च चन्दनम् ।
ककुभम् चाश्वकर्णञ्च लामज्जकधनञ्जयौ ॥
कषायमधुराणां च शीतान्यपि च लाभतः ।
भागाम् चतुष्पलानकृत्वा द्विद्रोणेऽपाम् विपाचयेत् ॥
रसेऽष्टभागशेषे तु कल्कैरेभिर्विपाचयेत् ।
बलां नागबलां जीवामात्मगुप्ताम् कशेरुकाम् ॥
नतं रसं च स्पृक्कां च सूक्ष्मैलां त्वचमेव च ।
जीवकर्षभकौ मेदौ मधुकं नीलमुत्पलं ॥
कुङ्कुमं वर्णं करणमगुरुम् पत्रमेव च ।
विदारीम् क्षीरकाकोलीम् वीरानपि च शारिवां ॥

शतावरीम् प्रियङ्गुम् च गुड़ूचीम् पद्मकेसरम् ।
लामज्जकं चन्दनानि राजादन फलानि च ।।
मुक्ताविद्रुमसंख्यानाम् चन्द्रकान्तेन्द्रनीलयोः ।
स्फटिकं रजतम् हेमं मणिमौक्तिकमेव च ।।
यष्टिमधुकमाञ्जिष्ठांशुमत्यः पयोन्वितान् ।
श्लक्ष्णपिष्टानिमान् कृत्वा शनैर्मृद्वग्निना पचेत् ॥
तैलपात्राणि चत्वारि तैलादष्टगुणं पयः ।
पयोर्द्धभागेन भिषक् प्रदद्यादाम्लकाञ्जिकम् ॥
शतशोऽथ विपक्तव्यं सहस्रगुणमेव वा ।
सम्यक् सिद्धस्य चाप्यस्य एतद् भवति लक्षणम् ॥
आलोड्यते करेणैव रवेःकाल उपस्थिते ।
स्वस्तिवाच्य द्विजातिम् स्तु प्रयतः कृतमङ्गलः ॥
प्रयोजयेत् तैलमिदममृतम् देवपूजितम् ।
वस्त्यास्थापनपानैश्च नास्यैरभ्यञ्जनैस्तथा ॥
सर्व्वरोगप्रशमनमिन्द्रियाणां बलावहम् ।
दाहतृष्णापरीतानाम् श्रेष्ठमभ्यञ्जनं शिवम् ।।
वृद्धानाम् बालजनानांबालानामङ्गवर्द्धनम् ।
कान्तत्वं स्त्रिषु सौभाग्यं प्रजाश्च बहुविस्तारः ।।
स्त्रियश्च गर्भं गृह्णन्ति प्रयोगादस्यतस्य हि ।
अशीतिम् वातजान् रोगान् रक्तजान् पित्तजां स्तथा ।।
श्लेष्मिकान् सन्निपातोत्थान् सर्व्वानेव चिकित्सति ।
सुपर्णं चक्षुर्ग्राहीन तथाभ्यङ्गादाजायते ।।
पापमङ्गलमलक्ष्मीघ्नं श्रीमेवाग्निविवर्द्धनम् ।
अस्य प्रयोगात् तैलस्य महर्षिः च्यवनः किल ॥
पुनर्युवत्वामपन्नो जरारोगविवर्ज्जितः ।
आयुष्कामश्च भगवान् मार्कण्डेयो महान् ऋषिः ।
तैलमेतत् प्रयुञ्जानो दीर्घमायुरवाप्तवानिति ।

116, 15 : Made artificial limb of iron for Viśpalā.[1]
157, 4 : Prayer to prolong our life.
5 : Prayer to preserve the wombs of animals.
6 : You have become physician by your medicines.
180, 4, 10; 182, 8; 183, 6; 184, 6 : Prayer for long life, food and strength.
ii. 9, 4 : Prayer to save us from old age.
v. 75 : Madhuvidyā Viśārad : Versed in the science of reviving dead men.
78, 7-9 : The mantras for prevention of abortion गर्भस्रावण्युपनिषत् ।
vi. 62, 7 : You hear the prayer of women longing for sons. You make dry cows yield milk.
10 : Come to our house to give us sons.

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[1] "चरित्रं हि वेरिवाच्छेदि पर्णम्
आजा खेलस्य परितक्म्यायाम् ।
सद्यो जंघामायसीं विश्पलायै
धने हिते सर्तवे प्रत्यधत्तम् ॥"

Rgveda, i, 116, 15.

अगस्त्यपुरोहितः खेलो नाम राजा तस्य सम्बन्धिनी विश्पला नाम स्त्री, संग्रामे शत्रुभिः छिन्नपदा आसीत् । पुरोहितेन अगस्त्येन स्तुतौ अश्विनौ रात्रौ आगत्य आयोमयं पादं समधत्ताम् । तदेतदाह—'आजा'—आजौ, संग्रामे, अगस्त्यपुरोहितस्य खेलस्य राज्ञः सम्बन्धिन्याः विश्पलाख्यायाः, 'चरित्रं'—चरणम्, 'वेरिव'—वेः पक्षिणः पर्णं पतत्रम् इव, 'अच्छेदि हि'—पुरा छिन्नमभूत् खलु । हे अश्विनौ ! युवां अगस्त्येन स्तुतौ सन्तौ, 'परितक्म्यायां'—रात्रौ, आगत्य, 'सद्यः'—तदानीमेव, 'सर्तवे'—सर्तुं गन्तुम् इत्यर्थः, विश्पलायै 'आयसीं'—लोहमयीम्, 'जङ्घां'—जङ्घोपलक्षितं पादम्, 'प्रत्यधत्तम्'—सन्धानम् एकीकरणमित्यर्थः, कृतवन्तौ ।"

Sayana.

vii. 8, 19 : Giver of cure.
9, 11 : Be the nourisher of the world and the body.
15 : Give Vatsya a house, like Vimada, with medicines which are near and which are distant.
22, 10 : You treat the sick.

We find similar references in the Atharvaveda.

vii. 53, 1 : The Aśvins—they who are the two physicians of the gods—they have repelled death from us by their powers.

In the Caraka Saṁhitā the deeds preformed by Aśvins are thus referred to :—

" The twin Aśvins are celestial physicians. It has been said that they are partakers of a share of the offerings made in sacrifices. (In days of yore) when the head of sacrifice had been severed from his body, it was the Aśvins who fixed it again on the trunk.

" The broken teeth of Pusāna, the torn out eyes of Bhaga and the stupefaction of the arms of the wielder of the thunderbolt were treated by him.

" The deity also of cool ray (*viz.*, Soma) was treated by them when he was seized by Phthisis. Verily when Candra was (in consequence of Phthisis) divested of his handsome features, it was the Aśvins who restored him to happiness (by curing him of his maladies).

" Cyavan, the son of Bhrigu had not given up desire when he had become old and been overtaken by ugliness and when he had been afflicted by loss of complexion and voice. It was the Aśvins who restored him to youth once more.

" Those foremost of physicians by these and diverse other acts (of success in treatment) became objects of worship with many high-souled deities and others having Indra for their head.[1]

In the Suśruta Saṁhitā I. 1, the supernatural cures performed by Aśvins are thus related :—

"It is said that the god Rudra severed the head of the god of sacrifice (Yajña). Thereon the gods approached the divine Aśvins and addressed them in the following manner :—'O Lord Aśvin twins, who are to be the greatest of us all, unite the head of the Yagña with his severed trunk.' The Aśvins replied, 'We shall do, O Lords, as you order us.' Then the gods propitiated the god Indra in order that a portion of the oblations offered in the course of a sacrifice, might be allotted to those heavenly twins. The Aśvins reunited the severed head of Yajña to his body as prayed for." The Aśvins thus secured an everlasting glory on the art of healing and received the Aśvin libation. "At one time," says he, "surgeons were looked upon as unclean and unfit to mix in respectable society ; but the success gained by the Aśvins in the case of Yajña at once raised them in the estimation of all" (*Vide* Tait. Saṁ., vi, 4, 9, 1 ; Śatap. Br., and Ait. Br., 1,18).

The following epithets are applied to the Aśvins in the Ṛgveda :

Śatakratu (i, 112, 23).
Nara (i, 46, 4 ; 47, 8 ; 182, 8 ; 183, 3).
Madhuvidyā Viśārad (i, 116, 12 ; 117, 22 ; 119, 9 ; v, 75, 1—9).
Two Dhanañjayas (vii, 74, 3).
Two Rudras (ii, 41, 7 ; v, 73, 8 ; viii, 22, 14 ; 26, 5).
Pracetās (viii, 9, 15, 20).
Maghavā (viii, 26, 7).

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[1] A. C. Kaviratna's Trans. of Caraka Samhitā, pp. 1067-68.

Śacīpati (vii, 67, 5).
Bhiṣaj: (1, 116, 16; viii, 86, 1; x, 39, 5).
Paura (v, 74, 4).
Amara (Immortal) (v, 77, 5).
Two Kings (vii, 67, 1; 71, 4; x, 39, 11).
Two devas (vii, 70, 4; 74, 4; viii, 35, 4-6, 26; x, 24).
Two lords of water (viii. 21, 4, 5; 26, 6),
Two poets (x, 40, 6).
Vidhātā (i, 181, 7).
Puṣā (i, 184, 3).
Two Nāsatyas: i, 3, 3; 20, 3; 34, 7, 9-11; 46, 5 47, 7, 9; 116, 1, 2, 4, 9-11, 13, 14, 17, 20, 22; 117, 6, 11, 23; 118, 4, 11; 180, 9; 182, 43; 183, 3; 184, 3; ii, 41, 7; iv, 3, 6; 43, 7; 44, 4, 7; v, 74, 2; 75, 7; 77, 4; 78, 1; vi, 63, 1, 7, 10; vii, 67, 3; 72, 1, 2, 5; 72, 5; 74, 6; viii, 5, 23, 32, 35; 8, 14, 15; 9, 6, 9; 22, 5; 26, 2, 8; 42, 4-6; 57, 4; 85, 1, 9; 101, 7; x, 41, 2.
Two Dasras: i, 3, 3; 47, 2, 6; 92, 16, 18; 112, 24; 117, 5, 20, 22; 118, 3; 119, 7; 120, 4; 139, 3, 4; 180, 5; iv, 43, 4; 44, 6; vii, 69, 3; viii, 86, 1.

THEIR WORKS:

The Aśvins are credited with the authorship of the following books:—

1. Cikitsāsāra Tantra: or the Abstract of Treatment by the Aśvins. It is mentioned in the Bramhavaivarta Purāṇa.[1]

2. In the Bower MS., the eleventh chapter treats of "The doctrine of Chebulic Myrobolana according to the

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[1] See footnote 3, pp. 6-7.

Aśvins." "This chapter apparently professes to be the Harītakī-kalpa or 'Doctrine of Chebulic Myrobolan' extracted from a medical work by the Aśvins. This may have been the Aśvini Saṁhitā of which, however, no copy seems now to be known to exist. As an extract, therefore, from a lost work of the Aśvins, the chapter is important. A similar Harītakī-kalpa which gives the doctrine of the ancient physician Hārīta on Chebulic Myrobolan occurs in the Hārita Saṁhitā in its Kalpa-sthāna (printed Ed., p. 400)." (Hœrnle.)[2]

3. The Aśvin Saṁhitā : An Aśvin Saṁhita is quoted in Bhāva Prakāśa II, 3, p. 24 (Jiva. Ed.). Dr. Cordier (see his Recentes Decouvertes, p. 29) possesses fragmentary manuscripts of two distinct works, both calling themselves Aśvini Saṁhitā, and both containing a version of a Harītakī-kalpa. Dr. Hœrnle thinks them to be *mediæval apocryphal* production.

4. Dhāturatnamāla : A compilation from the Aśvini Kumāra Saṁhitā on the preparation of metallic and mineral powders as oxides and other compounds of gold, silver, copper, lead, tin and iron.

MSS : Bik. MSS., 1393. (Saṁvat 1717).

Begins :

अथ धातूनां रत्नमालां वक्ष्यामः ।
रौप्यं हेम तथा ताम्रं नागं वङ्गं तथायसम् ।
मरणेभ्यो भयत्राता रोगग्रस्ताश्च ये नराः ।
रत्नमाला हि धातूनां कृता एषां हिताय वै ॥

End :

इति—वैद्यकशास्त्रे अश्विनीकुमार संहितायां रत्नमाला समाप्ता

See also Devadatta of Guzrat (14th century).

Footnote 359 in Bower MS., Ch. XI, p. 164.

5. Aśvini Saṁhitā :

MSS. : G. O.M. L. xxiii, 13069.

"A treatise on medicine said to have been revealed by the celestial twin brothers Aśvins. Contains Kanarese meaning for the stanzas.

Beginning :

अश्वगन्धा वचा कुष्ठं गजपिप्पलिका समम् ।
महिषीनवनीतेन लेपात्कर्णौ विवर्धते ॥

Colophon :

इत्यश्विनीसंहितायां सन्निपातप्रकरणं ।

End :

उपक्षेपस्ततो दाहः देहे तिष्ठन् महात्ययम् ।
विषमं वा ज्वरं कुर्यात् मृत्युं व्यापदमेव च ॥

6. Nāḍī Nidāna : "A commentary on the Nāḍī Nidāna which is a treatise on the science of feeling the pulse, said to have been revealed by the twin celestial brothers Aśvins."

MSS. : G. O. M. L. xxiii, 13151.

Beginning :

आदौ समस्तरोगेषु अष्टस्थानं परीक्षयेत् ।
नाडीं च स्पर्शरूपं च शब्दनेत्रपरीक्षयोः ॥
नाभिस्थानं च जिह्वा च एता दृष्ट्वा भिषग्वरेः ।

आदौ रोगपरीक्ष(क्षा)स्यादौ समस्तरोगेषु वातश्लेष्मपित्तगतसर्वरोगेषु । अष्टस्थानगतनाडीं परीक्षयेच्च शोधयेत् ।

End :

सर्वेषां रोगाणाम् एतच्च षड्गुणा शुभाः ।

Colophon :

अश्विनीदेवताकृती नाडीपरीक्षा सप्तविंशति श्लोकाः समाप्ताः

The formulæ attributed to the Aśvins :—

	Formulæ.		Books.	Page.	Verses.
1.	The Mātulaṅga Pills		C.D. xxiii, 11, Bower MS.	251 87	 75b-77a
2.	The other ,, ,,		,,	,,	80-84
3.	The Gulma Powder		,,	88	85-6
4.	Aśvina-haridrā-cūrṇa		,,	,,	96-101
5.	The Laśuna clarified butter		,,	100	216-22
6.	The Antifebrile ,, ,,		,,	,,	223-5
7.	The Antitoxic ,, ,,		,,	102	241-4
8.	The Vindu clarified butter		,,	103	251-5
9.	Formula to cure hæmorrhage		,,	117	418-25
10.	Amṛita-taila		,,	106	287-312a
11.	Kṣīra Yoga	Medicines for strangury	,, V. S. xxxv. C.D. xxiii. B. P. II. 3 S. S.vi 58	133 497 503 388 43 383	575 29a 37b 7b ... 40a
12.	Ayorāja Yoga		,, V.S. xxxv. C. D. xxxii. B. P. II. 3. H. S. III. 29	133 499 384 37 312	579 48 26a ... ...
13.	The Aśvagandhā Enema		,,	139	618-25a
14.	Pippalī-Vaddhāmāna Rasāyana		,,	142	716-737a
15.	Aśvina-rasāyana		,,	148	773b-81a
16.	A formula for 3 different gruels		,,	153	810-13
17.	Aśvina Harītakī Kalpa[1]		,,	164	917-29
18.	Bṛhat Guḍa Pippalī		R. S. S.	401	...
19.	Phalaghṛta		V. M. B. P. II, IV. G. N. I.	489-99 1115 15	... ...
20.	Amṛta Guggulu		V. M. G. N II, C. D.	228 240 152	... ...
21.	Amṛtādya Ghṛta		C. D. B. P. ii. xxi.	150 610	... ...
22	Amṛtaprāsavaleha		,, ii. ii.	388	...
23.	Punarnavā Guggula		C. D.	152	...
24.	Kuṅkumādya Taila		C. D. V. M.	274 412-13	... ...
25.	Gadhūmādya Ghṛta		V. M.	527	...
26.	Mahāsugandhi Oil		,,	,,	...
27.	Guḍakuṣmāṇḍa Kusmāṇḍaka Rasāyaṇa		,, A. H. S. IV G. N.	528 78 340	... ...

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[1] For the list see I. A., February 1914, p. lx.

	Formulæ.		Books.	Pages.	Verses.
28.	Vṛhat Nārikelakhaṇḍa	...	B. P. ii. vi.	368-9	...
29.	Dāḍimādya clarified butter	...	C. D.	199	...
30.	Śatāvarī " "	...	G. N. I.	14	...
31.	Hingvādya Powder	...	" Aśvinsaṁhitā	69 ...	... ...
32.	Dasāṅga Oil	...	G. N. I.	45	...
33.	Vṛhat Agnimukha powder	...	"	83	...
34.	Citraka Haritakī Avaleha	...	"	150	...
35.	Haritakī Avaleha	...	"	151	...
36.	Citraka Avaleha	...	"	156	...
37.	Svalpakadalikhaṇḍaghṛta	...	Saṁkṣiptasāra.	44	...
38.	Ayalapati Rasa	...	Cikītsāsāra Saṁgraha Goml., xxiii, 13140.		
39.	Mārtaṇḍa Rasa:	...	Ratnakarauṣadha Yoga-grantha, Goml., xxiii, 13190.		
40.	Vālasūryyodayo	...	Vaidya Grantha, Goml, xxiii. 13221.		

1. MĀTULAṄGA GUḌIKĀ OF THE AŚVINS.

आश्विनी मातुलुङ्गगुड़िका ।

सौवर्चलस्य च पलं द्विगुणं चाम्लवेतसम् ।
चतुर्गुणमजाजीनां मरिचस्याष्टमं भवेत् ॥
मातुलुङ्गरसेनैतद्गुड़िकां कारयेद्भिषक् ।
प्रशान्तमग्निञ्जनयेद्वातगुल्मञ्च नाशयेत् ॥

2. AŚVINS' MĀTULUṄGA GUḌIKĀ.

आश्विनी मातुलुङ्गगुड़िका ।

साग्निकं त्रिकटुकं सह पुष्करेण
हिङ्ग्वम्लवेतसयुतां सविड़ाश्वगन्धां ।
कुस्तुम्बुरूनि वचया सह दाड़िमञ्च सौवर्चलं
यवभवं तु नवञ्च क्षारं ॥
दद्यात्तुलाष्टसमांशलवां यवानीं
कृष्णाजगन्धपिशुनामरजाभजाजीं ।
तद्वास्त्वरांशपरिशुष्कसमाहितांश्च
चूर्णं भिषक्समरसं तत्र योजयीत ॥

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तद्बीजपूरकरसैर्न्निचितं प्रपिष्य
कुर्य्याद्भिषग्व गुड़िका बदरप्रमाणा: ।
एकामरिष्टमधुमाधवशर्क्करेण
काल्यं पिवेत सुरया दधिमस्तुना वा ॥
काशं श्वासं पाण्डुरोगाञ्चिरस्थं
प्लीहजीर्णं शूलमानाहमुग्रं ।
हिक्कां हृद्रोगं जाड्यतां
ष्ठीवनत्वमामातिसारञ्च सशूलगुल्मं ॥
विसूचिकामलसकमग्निमार्द्दवं
प्रवाहिकां गुदपरितापमर्शसां ।
शमेन्ति ता विधिवदिहोत्तमं तम:
प्रयोजिता ह्यपि खलु घर्म्मवारिणा ॥

3. Asvin's Gulma Curṇa.

गुल्मचूर्णमाश्विनं ।

पाठाकलिङ्गयवमुस्तकरोहिणीनां भागा:
सहातिविषया धरणानि कुर्य्यात् ।
कुर्य्याच्चतुर्थधरणेन समां हरिद्रां
मूत्रेण गो: सह पिवेदथ चूर्णमेतत् ॥
कुष्ठानि षट्त्रिंशतिकानि निहंति देहे
स्थानानि नाशयति सप्तमहाच्चयसा ।
गुल्मांश्च नाश्यति मासकृत: प्रयोग:
सर्व्वाग्निकस्य घृतमांसपरस्य जन्तोरिति ॥

4. Aśvina-Haridrā-Cūrṇa.

हरिद्राचूर्णमाश्विनम् ।

उभे हरिद्रे मरिचं पद्मं कुष्ठं सपिप्पली ।
कर्प्पासमूलं मांसी च सर्व्वा:क्षारमथाष्टमम् ॥

एतानि समभागानि दृषदायां प्रपोषयेत् ।
कोलास्थिमात्रां गुड़िकां छायायां परिशोषयेत् ॥
ततस्तु गुड़िकामेकां दद्यादुष्णेन वारिणा ।
+ + + प्रशम्ययन्ते रोगजातानि ताच्चकृष्ण ॥
अजीर्णकमुदावर्त्तं मूत्रकृच्छ्रं गलग्रहम् ।
आनाहं वातगुल्मञ्च यच्च लूताविषं भवेत् ॥
सर्व्वं दूषीविषं हन्ति + + वृश्चिकदष्टकम् ।
मूढ़वातमपस्मारं शाण्ढ्रं शाण्ढ्रपुमांश्च यः ॥
भूतग्रहमथोन्मादं मूढ़गर्भाश्च यास्त्रियः ।
दंष्ट्रामूलविषार्त्तेषु पानमालेपनं तथा ॥

5, THE LASUNA CLARIFIED BUTTER,

आश्विनं लशुनकं नाम घृतं ।

लशुनस्य शतं विद्वाञ्जलेद्रोणे विपाचयेत् ।
चतुर्भागवशेषञ्च कषायमवतारयेत् ॥
तेन वैद्यः कषायेन विपचेत् घृताढ़कम् ।
कल्कपेष्याणि चैतानि सिद्ध्यमाने प्रदापयेत् ॥
कर्षंश्चित्रकमूलस्य पिप्पली कर्षमेव च ।
चव्यायाश्च भवेत्कर्षः शृङ्गवेर पलं तथा ॥
लवणानाम् च पञ्चानाम् पलार्द्धञ्चाम्लवेतसात् ।
तथा रामठकस्यापि हिङ्गुनोऽत्र पलम् भवेत् ॥
ततसिद्धं निस्रुतं सम्यक् सुगुप्तं सन्निधापयेत् ।
ततोमात्रां पिवेत्काले शृणु मे येषु लक्षितम् ॥
वातष्ठीलासु गृध्रस्यां वातगुल्मे प्लीहोदरे ।
वातघ्ने पालिपाण्डुनामर्शस्स्वथ भगन्दरे ॥
एकाङ्गरोगिणां दद्यात् तथा सर्व्वाङ्गरोगिणाम् ।
लशुनाद्यं घृतं ह्या तदश्विभ्यां संप्रकल्पितम् ॥

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6. THE ANTIFEBRILE CLARIFIED BUTTER.

ज्वरहरमाश्विनं नाम घृतं ।

घृतन्दशगुणे तोये साधयेदा जलक्षयात् ।
ततो दशगुणे तोये साध्यमामलकन्तथा ॥
दशभागावशिष्टेऽस्मिन् घृतप्रस्थं विपाचयेत् ।
ततो यथाबलं मात्रां पाययेज्ज्वरकाशिनम् ॥
सर्व्वज्वरहरं सर्पिरेतद्ब्रह्माभिपूजितम् ।
दीर्घकालं प्रयुक्तन्तु भवेद्वल्यम् रसायनम् ॥

7. THE ANTITOXIC CLARIFIED BUTTER OF THE AŚVINS.

विषहरन्नाम घृतमश्विनम् ।

चन्दनं स्वादुशिरश्च पद्मकं कुरुविन्दकम् ।
त्रायमाणाम् समां दद्यात्तथा चन्दनशारिवां ॥
तथा प्रतिविषां चैव तथा तामलकी भवेत् ।
चतुर्गुणे जले वैद्यो घृतप्रस्थं विपाचयेत् ॥
तद्धि पीतं प्रमेहीनाम् रक्तपित्तक्षयेषु च ।
अर्शसाम् भिन्नवर्च्चानाम् पाण्डुरोगे च तद्धितम् ।
प्रवृद्धे वहणोदोषां त्वग्दोषां च शारीरिणाम् ।
सर्पिरेतद्भवेत्पथ्यं विषघ्नममृतोपमम् ॥

8. THE VINDU CLARIFIED BUTTER.

विन्दुघृतमाश्विनम् ।

सुधाक्षीरपलैनेह द्वे पले सर्पिषः पचेत् ।
काम्पिल्लकपलं चैकं शाणार्द्धम् सैन्धवस्य च ॥
त्रिवृतायाः पलञ्चैकं कुडवोऽमलकीरसात् ।
तोयकंसेन विपचेच्छनैरर्कं शशिना भिषक् ॥
एतद्बिन्दुघृतं नाम अश्विनोऽनुमतम् शुभम् ।
विन्दवः पिबते यावत्तावद्वेगान्विरिच्यते ॥

कर्षप्रमाणन्दातव्यं जठरीसोपगुल्मयोः ।
तथा कच्छपरोगिनाम् युञ्जीत मतिमान् भिषक् ॥
उष्णंचानुपिवेत्तोयमल्पत्वात्तस्य सर्प्पिषः ।
एष गुल्मान्सनिचयान्सशूलान्सपरिग्रहान् ॥
भिनत्त्येकप्रयोगेन वायुर्ज्जलधरानिव ।
पञ्चगुल्मवधार्थम् हि सर्पिरेतत् प्रवर्त्तितं ।
सर्व्वासुरवधार्थाय यथा वज्रं स्वयम्भूवा ।
एतद्विन्दुघृतं प्रोक्तं सिद्धम् सिद्धानुमानितमिति ॥

9. A FORMULA OF THE AŚVINS TO CURE HAEMORRHAGE.

रक्तपित्तिनामाश्विनो योगः ।

विघुष्टशब्दौ श्रीमन्तावश्विनौ भिषजाम् वरौ ।
योगम् लोहितपित्तिनामर्शसाम ज्वरितेषु च ॥
वासवायोचतुः श्रेष्ठम् यदुक्तम् ब्रह्मणापुरा ।
चन्दनं नलदम् रोध्रमुशीरम् पद्मकेसरम् ॥
नागपुष्पञ्च बिल्वञ्च भद्रमुस्ताथ शर्कराम् ।
ह्रीवेरञ्च पाठां च कुटजस्य फलं त्वचम् ॥
शृङ्गवेरम् सातिविषां धातकीम् सरसाञ्जनाम् ।
आम्रास्थि जम्बुसारास्थि तथा मोचरसं भवेत् ॥
नीलोत्पलम् समङ्गां च सूक्ष्मैलाम् दाडिमत्वचम् ।
चतुर्व्विंशति चैतानि समभागानि कारयेत् ॥
तण्डुलोदकसंयुक्तं क्षौद्रेण सह पाययेत् ।
हितं लोहितपित्तिनामर्शसाम् ज्वरितेषु च ॥
मूर्च्छातमोपकृष्टानाम् तृषार्त्तानाञ्च दापयेत् ।
अतिसारस्य कर्त्तैष स्त्रीणाम् च रजनिग्रहम् ॥
अश्विभ्यानुमतो योगो रक्तपित्तनिवारणः ।
प्रच्युतानाञ्च गर्भाणाम् स्थापनम् परमुच्यते ॥

12 ; 117, 22 ; 119, 9) ; became a guest of Divodāsa (i, 116, 18 ; 119, 4), came to Jahṇu's sons with riches and progeny (i, 116, 19), and gave food to Manu (i, 112, 18) and Saubhari (viii, 5, 26).

(24) Gave potable rain water to merchant Dīrghaśravā, son of Uśija, (i, 112, 11), recovered the cows of Triśoka (i, 112, 12), made Paṭharvā strong in battle (i, 112, 17), and gave food to Sudāsa (i, 47, 6) and Bharadvāja (i, 117, 11), and Agastya (viii, 5, 25).

(25) They cured Śyāva who was cut in three pieces (i, 117, 24) and gave him a bride after he was cured of leprosy (i, 117, 8) ; raised water to quench thirst of Sara son of Ṛcatka (i, 116, 22) ; satisfied Vabhru with Soma (viii, 22, 10) and helped Gotama to drink water in the desert (i, 85, 11 ; 116, 9).

(26) Gave riches to Manu (i, 112, 16, 18), Śucānt, Sudāsa, the son of Pijanava (i, 112, 19), Vaśa (i, 116, 21), Aṁśu (viii, 5, 26), and King Suṣāma (viii, 26, 2).

(27) Released Saptavadhri and allowed him to enjoy the company of his wife ; she gave birth to a child after ten months (v, 78, 5-9).

(28) Gave Puraya's mares, Sumīḍha's cows, Peruka's food, King Sānta's horses and men, and Purupanvā's horses to Bharadvāya (vi, 63, 9, 10).

(29) Discovered Vṛtra (viii, 9, 4), produced fire by friction with woods (x, 24, 4).

(30) Aśvins were magnified by Kākṣivān, Vyaśva, Dīrghatāmā and Pṛthi, son of Vena (viii, 9, 10).

(31) Gave rain water to Manu and furrowed the land and sowed wheat (vii, 22 6).

In the Ṛgveda Aśvins are magnified in the following hymns :

i. 3 : 1,2,3.
20 : 3.
22 : 1-4.
30 : 17.
34.
46.
47.
92 : 16-18.
112.
116.
117.
118.
119.
120.
139 : 3-4.
157.
180.
181.
ii. 37 : 5.
39.
41 : 7-9.

iii. 58.
iv. 43.
44.
45.
v. 41 : 3.
43 : 17.
51 : 11.
73.
74.
75.
76.
77.
78.
vi. 62.
63.
vii. 67.
68.
69.
70.
71.
72.
73.
74.

viii. 5.
8.
9.
10.
22.
26 : 1-20.
27 : 8.
29 : 8.
35.
57.
73.
85.
86.
87.
101 : 7-8.
x. 24 : 4-6.
39.
40.
41.
65 : 12.
106.
131 : 5.
143.

References to the Aśvins as medical men in the Ṛgveda :

i. 34. 6 : Prayer for heavenly medicine, earthly medicine and aerial medicine. The three elements of the body mentioned.
Nursed Śaṁju son of Vṛhaṣpati.

11 : Prayer to prolong our life.

11. KṢĪRA YOGA.

क्षीर योगः ।

गुड़ेन क्षपयेत् क्षीरं कदुष्णं कामत. पिवेत् ।
मूत्रग्रहस्य भेषज्यम् सद्यस्कं मतमश्विनोः ॥

12. AYORĀJA YOGA.

अयोराज योगः ।

अयोराजः सूक्ष्मपिष्टम् मधुना सहपाययेत् ।
मूत्रग्रहस्य भेषज्यं सद्यस्कं मतमश्विनोः ॥

13. THE AŚVAGANDHĀ ENEMA.

अश्विनोरश्वगन्धा वस्तिः ।

अतः परं प्रवक्ष्यामि वलवर्ण प्रसादनम् ।
येन मांसानि वर्द्धन्ते वलं चैवोपजायते ॥
मूलानामश्वगन्धायाः पञ्चविंशतपलानि तु ।
कन्दग्रन्थे दायित्वातु स्थाल्यामाधाय साधयेत् ॥
पादभागावशिष्टाञ्च ज्ञात्वा तमवतारयेत् ।
तद्रसम् तु परिस्राव्य दृढ़पात्रेऽवसेचयेत् ॥
तस्मिन् कषाये मतिमानौषधानि प्रकल्पयेत् ।
जीवनि सर्व्वानि शर्कराचूर्णमेव च ॥
मधुसर्पिषय प्रसृतम् पिप्पलीचूर्णमेव च ।
किञ्चिल्लवणिकम् कृत्वा खजेनालोड्ययेद्भिषक् ॥
आसिच्य वस्तावच्छिद्रे वस्तिकर्म्मणि कारयेत् ।
एकेन यदि वा द्वाभ्यां त्रिभिर्व्वापि प्रमाणतः ॥

प्रत्यागते निरूहेऽस्मिन् परिषेकः सुखाम्बुना ।
ततो लोहित शालीनामोदनं मधुसर्प्पिषा ॥
क्षीरेण सह भुञ्जीत जाङ्गलानाम् रसेन वेति ॥

14. PIPPALĪ-VARDHAMĀNA TONIC

पिप्पली वर्द्धमान रसायन ।

पिप्पली वर्द्धमानस्य गुणाः कर्म्म च के वलम् ।
प्रवक्ष्याम्यानुपूर्व्वेण प्रजानां हितकाम्यया ॥
न ह्येतदमृतम् पित्वा पश्चात्तापयन्ति मानवाः ।
दर्शयत्येव सिद्धिं हि प्राणावामलकं यथा ॥
तस्माद्बलञ्च पुष्टिञ्च प्रज्ञां मेधाञ्च काङ्क्षता ।
रसायाणमिदम् सौम्यं कार्य्यमायुर्व्विवर्द्धनम् ॥
जीवनीयानि पित्वा तु स्निग्धो वान्तविरिक्तवान् ।
कृतसंसर्जनः काले पुण्याहेनारभेत्ततः ॥
पुनर्व्वस्वथ पुष्येण श्रवणेन श्रविष्टया ।
त्रिषूत्तरेषु हस्तेन सोमे योगमुपागते ॥
उपोषितः शिरःस्नातः शुक्लवासा जितेन्द्रियः ।
अभ्यर्चय देवतान् विप्रम् शेषाम् खादेत पिप्पलीम् ॥
ततश्चानुपिबेत् क्षीरं गव्यं छागमथापि वा ।
जीर्णे तस्मिन् स्तु भुञ्जीत शालीनाम पयसोदनम् ॥
एवमेतन्नरः खादेत् वर्द्धमानं सदाहनि ।
शतं पूर्णम् भवेद्यावद्दश वर्षाण्यथैव च ॥
ततोऽन्तेऽप्यवकर्षस्य सप्तरात्रम् पयोदनम् ।
प्रायशश्चानुभोक्तव्यं तथा मुद्गरसोदनम् ॥
सप्तरात्रे तृतीये तु जाङ्गलो मधुरो रसः ।
भोज्यं पेयं च पानीयम् शृतशीतं गुणान्वितम् ॥
रहे निवाते चासीत सततम् हितसेवि च ।
ततः क्रमेणामलकमस्वलार्थमुपकल्पयेत् ॥

वृक्षाम्लं दाड़िमाम्लञ्च सदा स्नानञ्च शीलयेत् ।
अनेन विधिना क्षिप्रं पुष्टिं लभति मानवः ॥
प्रमदा लभते गर्भम् वन्ध्या चापि प्रजायते ।
साम्यंन्त्यनेन शिचाक्षि राजयक्ष्मा हलीमकः ॥
अपस्मारस्तथोन्मादो ज्वरश्च विषमागतः ।
अनेकशः प्रयुक्ते तु वलीपलित नाशनं ॥
वर्णतेजोवलाधानिमश्च सोत्तमजीवनम् ।
कुष्ठरोगनिहन्तारमारोग्यजननं शिवम ॥
शुक्रवलप्रनष्टस्य इन्द्रियाणाम् प्रसादनम् ।
पिप्पल्यो हि शिवाः कार्ये कटुका मधुरान्वयाः ॥
स्निग्धाश्च शीतवीर्य्याश्च व्यवापिन्यो गुणान्विताः ।
कटुकत्वात् कफे पथ्याः स्नेहाच्च पवने हिताः ॥
शैत्यात्पित्तप्रशमना युज्यन्ते सर्व्वकर्म्मसु ।
विश्वः प्रवर्त्तते चाद्यः-कल्पः पञ्चविरेभ च ॥
अष्टको दशकश्चान्यो वलकालमभेक्ष्य च ।
क्षीरानुपानास्ताः कार्य्यास्तथा क्षीरोपसेवनाः ॥
नियमश्च यथादृष्टमाशीषश्च यथाश्रुतः ।
तस्मान्नियममालमन्व पुरुषेण यथाक्रमम् ।
प्रयोज्यमिदमारोग्यशीवलायुर्व्विवर्द्धनम् ।
पिप्पलीवर्द्धमानस्य कल्पोऽश्विभ्याम् प्रकल्पितः ।

अनुसृयुना प्रयोक्तार्थी यथासिद्धिमवाप्नुयात् ।
समूलानञ्च सपत्रान् सपर्वां सफलान्तथा ।
काकमाचीन्तु प्रत्यग्रां संहरेन्मतिमान्नरः ।
तुलापादं ससूक्ष्मं तु जलद्रोणे विपाचयेत् ॥
चतुर्भागस्थिते तत्र तैलप्रस्थं विपाचयेत् ।
चतुर्गुणेन पयसा कल्कां चेमान् विधानवित् ।
प्रपौण्डरीकम् मधुकम् रास्नामूलम् शतावरीम् ।
विड़ङ्गा शतपुष्पाञ्च स्वयमगुप्ताफलानि च ॥

एतदभ्यञ्जने पाने नष्टकर्मानुवासने ।
अशीतिं वातजान्रोगां सतैलमेतदपोहति ॥
मण्डूकपर्ण्याः स्वरसः प्रयोज्यः क्षीरेण यष्टिमधुकस्य चूर्णम् ।
रसं गुडूच्यास्तु समूलपुना आयुष्प्रदान्यामयनाशनि ॥
बलाग्निवर्णस्मृतिवर्द्धनानि मेध्यानि चैमानि रसायनानि ।
कल्कः प्रयोज्यः खलु शङ्खपुष्प्याः मेध्याविशेषेण तु शङ्खपुष्पी ॥
घृतमाक्षिकासंयुक्तं मधुकं यः पिबेन्नरः ।
क्षीरानुपायी स्त्रीवर्ज्यः स जिवेच्छारदाशतम् ॥
पञ्चाष्टौ सप्तदश चापि पिप्पल्यो मधुसर्पिषा ।
रसायनगुणान्वेषी मासमेकम् प्रयोजयेत् ॥
तिस्रस्तिस्रस्तु पूर्वाह्णे भुक्ताग्रे भोजनस्य च ।
पिप्पल्यः किंशुकक्षारभाविता घृतभर्ज्जिताः ॥
प्रयोज्याः घृतसंमिश्रा रसायनगुणैषिणा ।
जेतुं कासं क्षयं शोषं श्वासं हिक्कां गलामयम् ॥
अर्शांसि ग्रहणीदोषं पाण्डुतां विषमज्वरं ।
पीनसं स्वरभेदञ्च गुल्मं वातबलासकम् ॥

15. Aśvina-Rasāyana.

अश्विनारसायनम् ।

तप्यमानम् तपोऽत्युग्रं विश्वामित्रं महामुनिं ।
अश्विनौ देव भिषजावूचतुर्व्वरदाम् वरौ ॥
तपश्चरणखिन्नस्य नरस्याप्यायनम् पुनः ॥
रसायनमिदं श्रेष्ठमारोग्यबलवर्द्धनम् ।
गौरामलकचूर्णानाम् प्रस्थः स्याच्छिशिरोद्धृतः ॥
एकविंशतिरात्रम् तु स्वरसेनैव भावयेत् ।
प्रस्थः पिप्पलिचूर्णानाम् प्रस्थशालीरजो भवेत् ॥
द्वौ प्रस्थौ मधुनः स्यातां सर्पिषश्चाढकम् भवेत् ।
शर्करायाश्च द्वौ प्रस्थावर्द्धप्रस्थञ्च चित्रकात् ॥

एतत् सम्भृत्य सम्भारम् प्रक्षिप्य घृतभाजने ।
मासमेतत्स्थितम् वार्न्य प्राश्नीयात्तु यथाबलम् ॥
पलं वा द्विपलं वाथ लिह्यात्कल्यमभुक्तवान् ।
शतम् जौवति मेधावी वलीपलितवर्ज्जितः ॥
न चात्र नियमःकश्चित् स्नानभोजनमैथुने ।
धन्यम् यशस्यमायुष्यम् कल्याणम् मङ्गलम् परम् ।
विश्वामित्रेण चाभाषातमृषिभिश्चाभिपूजितम् ॥

16. A FORMULA FOR THREE DIFFERENT GRUELS.

आश्विनीयाम् यवागुत्त्रयम् ।

शतपुष्पां साड़िं बिल्वं पुष्करं चित्रकं वचं ।
बिड़ं सौवर्च्चलं चैव शृङ्गबेरं सपिप्पलीम् ॥
पलांशकं च लवणं दाड़िमं तुम्बुरूनि च ।
कुस्तुम्बुरुमजाजीञ्च समभागानि कारयेत् ॥
तण्डुलान्यमकी भृष्टान्यवागुं साधयेद्भिषक् ।
योनिशूलमुदावर्त्तं मूत्रकृच्छ्रञ्च साधयेत् ॥
यावन्तो वातिका रोगाः सर्व्वानेतान् नियच्छति ।
एषा यवागुराख्याता अश्विना भिषजां वराविति ॥

17. THE DOCTRINE OF CHEBULIC MYROBALAN ACCORDING TO AŚVINS.

हरितकीकल्पः आश्विनः ।

अथातो हरितकीकल्पं व्याख्यास्यामः ।
सुखोपविष्टं ब्रह्माणम् अश्विनी वाक्यमूचतुः ।
कुतो हरितकी जाता कतियोनिश्च कीर्त्तते ॥
रसाश्च कति संख्याताः कति चोपरसाः स्मृताः ।
कति नामानि वर्णा वा नाम्नि नाम्नि च लक्षणम् ॥

कां श्च रोगाञ्छमयते वर्ण रूपानि कानि च ।
केन द्रव्येण संयुक्ता कान् रोगान् शन्नियच्छति।
एतं प्रश्नं यथा पृष्टं भगवान् वक्तुमर्हसि ।
अश्विनोर्व्वचनम् श्रुत्वा ब्रह्मा वचनमब्रवीत् ॥

भवन्नाम् यदिदं पृष्टमस्य व्याकरणम् पृथक् ।
प्रवक्ष्याम्यनुपूर्व्वेण पुष्टिरूपकरम् + + ॥
पपात विन्दुर्म्मेधिन्याम् शक्रस्य पिवतोऽमृतम् ।
औषधिनाम् ततः श्रेष्ठा प्रादुर्भूता हरितकी ॥
विजया त्रिवृता चैव रोहिणी पूतनामृता ।
जीवन्त्यभया चैव सप्तयोनिर्हरितकी ॥
अलाबुवृत्ता विजया या वृत्ता सा तु रोहिणी ।
पूतानास्थिमयी सूक्ष्मा स्थूलमांसफलामृता ॥
सुवर्णवर्णा जीवन्ती पञ्चाश्री त्रिवृत्ता तथा ।
अभया कालिका लोके निर्द्दिष्टा ब्रह्मणा पुरा ॥
एतासां संप्रवक्ष्यामि रसवीर्य्यं समासतः ।
हरितकीं पञ्चरसमुष्णामलवणां शिवाम् ॥
गुणी लवणवर्ज्जी यः हरितक्या निरत्ययः ।
निरहरन्ति मलं यस्मादारोग्यायुष्यसम्मताः ॥
शिवा क्षिप्रसमुत्था च सुपचारा सदाभया ।
सुखा पुष्टिकरी चैव दरिद्राणां चिकित्सति ॥
तथैव सुकुमाराणां प्रायशः शाश्च ये नराः ।
अभया हि नृणां धन्या चिकित्सार्थे सदा हिता ॥
ससैन्धवां तु यः खादेदभयां समहौषधाम् ।
व्यत्यासेन च पिप्पल्यो न व्याधिर्व्विषहेत तम् ॥
गुडमिश्रद्वितीयां तु हं हं खादेत + + ।
सहस्रं स समाः प्राप्य नराः सर्व्वामयाञ्जयेत् ॥
अभयां सह सुण्ठ्या भुञ्जानो लघुभोजनं।
संवत्सरशतं जीवेत् प्रसाद्य विविधान् गदान् ॥
अरोगी बलसम्पन्नो वलीपलितवर्ज्जितः ।
ओजोस्करी शरीरे च भवेन्नित्यं निषेविता ॥

अभयाश्च हरिद्राश्च पिप्पल्यः सैन्धवन्तथा।
कुष्ठं चेति समायुक्तं गोमूत्रेण विरेचनम्॥
गुडं द्राक्षारसं क्षौद्रं तथैव च हरितकी।
एतत् काङ्कायनप्रोक्तं पैत्तिकानां विरेचनम्॥

पिप्पल्यः सैन्धवं चैव विड़ङ्गानि हरीतकी।
एतद्गोमूत्रसंयुक्तं सहरिद्रां विरेचनम्॥
हरितकीं समगुड़ं मधुना सह संयुताम्।
युक्तो वैरेचनो योगः सिद्धं स्याच्च रसायनम्॥
सर्व्वरोगाग्निहन्त्रेषा पूर्व्वोक्ता हि हरीतकी।
व्याख्यातम् तत्समासेन विस्तारेणापि मे शृणु॥
विषमं च सुराणाञ्च विषम् हन्याद्धरीतकी।
पावकम् वर्द्धयेत्येषा गुल्मं चाशु नियच्छति॥
हरीतकीप्रयोगस्तु जठराण्यपि नाशयेत्।
आयुष्य साधयत्येषा कफद्वाराणि शोषिणाम्॥
कासं श्वासञ्च हिक्कां च तमोमूर्च्छां प्रतानकम्।
अभयां नातिवर्त्तते चमूमैन्द्रीमिवासूरा॥
कामलां चैव कुष्ठाञ्च नाशयेत हरीतकी।
अर्शसां शमनी चैव सर्व्वमेहविनाशनी॥
हरीतकी प्रयोगाच्च श्वयथुः प्रविदीर्य्यते।
उद्धता मरुतेनेव तोयसु + प्रवाहिकाः॥
श्लेष्मपित्तरक्तपित्ते पाण्डुरोगम् हलीमकं।
अभया प्र + + + व्याधयस्तथा॥
श्लेष्मप्रसेकं वैवर्ण्यं स्वरभेदमरोचकम्।
हृद्रोगं चैव मूर्च्छाञ्च हन्याद्येषा हरीतकी॥
यथा वैश्वानरो युक्तो बलवान् वायुना भवेत्।
तथा वीर्य्यसमापन्ना गुड़ेन स्याद्धरीतकी॥

तत्र श्लोकाः।

यथाकथञ्चिद्गुड़मिश्रितैषा पीता भिषग्वाप्यथवापि लीढ़ा।
दुरासदाम् चैव चिरस्थितम् च गदान्नरानामगदान करोति॥

न सोऽस्ति रोगो भुवि मानवानाम् हरीतकीयं न जयेत् प्रसह्य।
यशस्विनीन्तामामृतप्रसूतां प्रयोजयेत् सर्व्वत एव धीरः ॥
हितं हयानाम् लवणं प्रशस्तं जलं गजानां ज्वलनं गवाञ्च ।
हरीतकी श्रेष्ठतमा नराणां चिकित्सा ते पङ्कजयोनिराह इति ॥

हरितकीकल्पः आश्विनः ॥

18. Vṛhat Guḍa Pippalī

वृहद्गुड़पिप्पली ।

विडङ्गं त्र्यूषणं हिङ्गु कुष्ठं लवणपञ्चकं ।
विक्षारं फेणकं चव्यं श्रेयसी कृष्णजीरकं ।
तालपुष्पोद्भवं क्षारं नाड्याः कुष्माण्डकस्य च ।
अपामार्गोद्भवं क्षारं चिञ्चायाः चित्रकन्तथा।
एतानि समभागानि पुराणो द्विगुणो गुड़ः ।
गुड़तुल्यं प्रदातव्यं चूर्णञ्चैव कणोद्भवं ।
मर्द्दयित्वा दृढ़े पात्रे मोदकानुपकल्पयेत्।
भक्षयेद्वर्द्धयेन्नित्यं प्लीहानं हन्ति दुस्तरं ।
प्रमेहं पाण्डुरोगञ्च कामलं वह्निमान्द्यकं ।
यकृतं पञ्चगुल्मञ्च तूदरं सर्व्वरूपकं ।
जीर्णज्वरं तथा शोथं कासं पञ्चविधन्तथा ।
अश्विभ्यां निर्म्मिता ह्येषा सुवृहद्गुड़पिप्पली ॥

19. Phala Ghṛta.

फलघृतम् ।

मञ्जिष्ठा मधुकं कुष्ठं त्रिफला शर्करा वचा ।
अजमोदा हरिद्रे द्वे हिङ्गु तिक्तकरोहिणी ॥
काकोली क्षीरकाकोली मूलं चैवाश्वगन्धजम् ।
जीवकर्षभकौ मेदे रेणुका वृहतीद्वयम् ॥
उत्पलं चन्दनं द्राक्षा पद्मकं देवदारु च ।
एभिरक्षसमैर्भागैर्घृतप्रस्थं विपाचयेत् ॥

चतुर्गुणेन पयसा विपचेन्मृदुनाऽग्निना ।
एतत्सर्पिर्नरः पीत्वा स्त्रीषु नित्यं वृषायते ॥
पुत्रं जनयते वीरं मेधाढ्यं पुष्करेक्षणम् ।
वन्ध्या च लभते गर्भं श्यामा वेगात्प्रसूयते ॥
या चैव स्थिरगर्भास्यान्मृतापत्या तु या भवेत् ।
अल्पायुर्जननी चैव या च सूत्वा पुनः स्थिता ॥
एतदेव कुमाराणां सर्वाङ्गग्रहमोक्षणम् ।
धन्यं यशस्यमायुष्यं कान्तिलावण्यपुष्टिदम् ॥
ये च कल्याणके प्रोक्तास्ते चापीह गुणाः स्मृताः ।
ऐतत्फलघृत नाम ह्यश्विभ्यां परिकीर्तितम् ॥

20. AMṚTĀ GUGGULU.

अमृतागुग्गुलुः ।

प्रस्थमेकं गुडूच्यास्तु अर्द्धप्रस्थञ्च गुग्गुलोः ।
प्रत्येकं त्रिफलायाश्च तत्प्रमाणं विनिर्द्दिशेत् ॥
सर्व्वमेकत्र संक्षुद्य साधयेत् नल्वणेऽम्भसि ।
पादशेषं परिस्राव्य पुनरग्नावधिश्रयेत् ॥
तावत् पचेत् कषायन्तु यावत् सान्द्रत्वमागतम्
दन्तीव्योषविडङ्गानि गुडूचीत्रिफलात्वचः ॥
ततश्चार्द्धपलं पूतं गृह्णीयाच्च प्रति प्रति ।
कर्षन्तु त्रिवृतायास्तु सर्व्वमेकत्र कारयेत् ॥
तस्मिन् सुसिद्धं विज्ञाय कवोष्णे प्रक्षिपेद् बुधः ।
ततश्चाग्निबलं ज्ञात्वा तस्य मात्रां प्रदापयेत् ॥
वातरक्तं तथा कुष्ठं गुदजान्यग्निसादनम् ।
दुष्टव्रणप्रमेहांश्च सामवातं भगन्दरम् ॥
नाड्याढ्यवातश्वयथुन् सर्व्वानेतान् व्यपोहति ।
अश्विभ्यां निर्म्मितः पूर्व्वममृताख्यो हि गुग्गुलुः ।

अर्द्धप्रस्थं त्रिफलायाः प्रत्येकमिह गृह्यते ॥

21. AMṚTĀDYA GHṚTA.

अमृताद्यं घृतम् ।

अमृता मधूकं द्राक्षा त्रिफला नागरं बला ।
वासारग्वधवृश्चीर-देवदारुत्रिकण्टकम् ॥
कटुका सवरी कृष्णा काश्मर्य्यस्य फलानि च ।
रास्नाक्षुरकगन्धर्व्व-वृद्धदारघनोत्पलैः ॥
कल्कैरेभिः समैः कृत्वा सर्पिःप्रस्थं विपाचयेत ।
धात्रीरससमं दत्त्वा वारित्रिगुणसंयुतम् ॥
सम्यक्‌सिद्धन्तु विज्ञाय भोज्यपाने प्रशस्यते ।
बहुदोषान्वितं वातं रक्तेन सह मुर्च्छितम् ।
उत्तानञ्चापि गम्भीरं त्रिकजङ्घोरुजानुजम् ।
क्रोष्टुशीर्षं महाशूले चामवाते सुदारुणे ॥
वातरोगोपसृष्टस्य वेदनाञ्चापि दुस्तराम् ।
मूत्रकृच्छ्रमुदावर्त्तं प्रमेहं विषमज्वरम् ॥
एतान् सर्व्वान् निहन्त्याशु वातपित्तकफोद्भवान् ॥
सर्व्वकालोपयोगेन वर्णायुर्ब्बलवर्द्धनम् ।
अश्विभ्यां निर्म्मितं श्रेष्ठं घृतमेतदनुत्तमम् ॥

22. AMṚTAPRĀŚ AVALEHA.

अमृतप्राशावलेहः ।

क्षीरे धात्री च मञ्जिष्ठा क्षीरिणाञ्च तथा रसैः
पचेत् सुमैर्घृतं प्रस्थं मधुरैः कर्षसम्मितैः ॥
द्राक्षा त्रिचन्दनोशीरैः शर्करोत्पलपद्मकैः ।
मधुककुसुमानन्ता काश्मरी तृणसंज्ञकैः ॥
प्रस्थार्द्धं मधुनः शीते शर्करार्द्धतुलां तथा ।
पलार्द्धिकांश्च सञ्चूर्ण्य त्वगेलापत्रकेशरान् ॥
विनीय तत्र संलिह्यान् मात्रात् नित्यं सुयन्त्रितः ।
अमृतप्राशमित्येतदश्विभ्यां परिकीर्त्तितम् ॥

क्षीरमांसाशिनां हन्ति रक्तपित्तं क्षतक्षयम् ।
तृष्णारुचिश्वासकासच्छर्द्दिमूर्च्छाप्रमर्द्दनम् ॥
मूत्रकृच्छ्रज्वरघ्नञ्च वल्यं स्त्रीरतिवर्द्धनम् ॥

23. Punarnavā Guggulu.

पुनर्नवागुग्गुलुः ।

अमृतायाश्च द्विप्रस्थं प्रस्थमेकञ्च गुग्गुलोः ।
प्रत्येकं त्रिफलाप्रस्थं वर्षाभूप्रस्थमेव च ॥
सर्व्वमेतच्च संक्षुद्य क्वाथयेन्नल्वनेऽम्भसि ।
पुनः पचेत् पादशेषं यावत् सान्द्रत्वमागतम् ॥
दन्तीचित्रकमूलानां कणाविश्वफलत्रिकम् ।
गुडूचीत्वग्विडङ्गानां प्रत्येकार्द्धपलोन्मितम् ॥
त्रिवृताकर्षमेकन्तु सर्व्वमेकत्र चूर्णयेत् ।
सिद्धे चोष्णे क्षिपेत् तत्र अमृतागुग्गुलोः परम् ॥
यथा चाग्निवलं खादेदम्लपित्ती विशेषतः ।
वातरक्तं तथा कुष्ठं गुदजान्यग्निसादनम् ॥
दुष्टव्रणप्रमेहांश्च सामवातं भगन्दरम् ।
नाड्याढ्यवातं श्वयथुन् हन्यात् सर्व्वामयानयम् ॥
अश्विभ्यां निर्म्मितो ह्येषोऽमृताख्यो गुग्गुलुः पुरा ।

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24. Kuṅkumādya Taila.

कुङ्कुमाद्यं तैलम् ।

कुङ्कुमं चन्दनं लाक्षा मञ्जिष्ठा मधुयष्टिका ।
कालीयकमुशीरञ्च पद्मकं नीलमुत्पलम् ॥
न्यग्रोधपादाः प्लक्षस्य शुङ्गाः पद्मस्य केशरम् ।
द्विपञ्चमूलसहितैः कषायैः पलिकैः पृथक् ॥
जलाढ़कं विपक्तव्यं पादशेषमथोद्धरेत् ।
मञ्जिष्ठा मधुकं लाक्षा पत्तङ्गं मधुयष्टिका ॥

कर्षप्रमाणैरेतैस्तु तैलस्य कुडवं पचेत् ।
अजाक्षीरं तद्द्विगुणं शनैर्मृद्वग्निना पचेत् ॥
सम्यक् पक्वं परं ह्येतन्मुखवर्णप्रसादनम् ।
नीलिकापिडकाव्यङ्गानभ्यङ्गादेव नाशयेत् ॥
सप्तरात्रप्रयोगेण भवेत् काञ्चनसन्निभम् ।
कुङ्कुमाद्यमिदं तैलमश्विभ्यां निर्म्मितं पुरा ॥

25. GODHŪMĀDYA GHṚTA.

गोधूमाद्यं घृतम् ।

गोधूमात्तु पलशतं निष्क्वाथ्य सलिलाढके ।
पादावशेषे पूते च द्रव्याणीमानि दापयेत् ॥
गोधूमसुञ्जातफलं माषा द्राक्षा परूषकम् ।
काकोली क्षीरकाकोली जीवन्ती सशतावरी ॥
अश्वगन्धा सखर्ज्जूरा मधुकं त्र्यूषणं सिता ।
भल्लातकं स्वयंगुप्ता समभागानि कारयेत् ॥
घृतप्रस्थं पचेदेवं क्षीरं दत्त्वा चतुर्गुणम् ।
मृद्वग्निनाऽथ सिद्धे च द्रव्याण्येतानि निक्षिपेत् ॥
त्वगेला पिप्पली धान्यं कर्पूरं नागकेसरम् ।
यथालाभं विनिक्षिप्य सिताक्षौद्रपलाष्टकम् ॥
दत्त्वा चुदण्डेनाऽऽलोड्य विधिवद्विनियोजयेत् ।
शाल्योदनेन भुञ्जीत पिबेन्मांसरसेन वा ॥
केवलस्य पिबेदस्य पलमात्रं प्रमाणतः ।
न तस्य लिङ्गशैथिल्यं न च शुक्रक्षयो भवेत् ॥
बल्यं परं वातहरं शुक्रसंजननं परम् ।
मूत्रकृच्छ्रप्रशमनं वृद्धानामपि शस्यते ॥
पलद्वयं तदश्नीयाद्द्वयरात्रमतन्द्रितः ।
स्त्रीणां शतं च भजते पीत्वा चानुपिबेत्पयः ।
अश्विभ्यां निर्मितं चैतद्गोधूमाद्यं रसायनम् ॥

26. MAHA-SUGANDHI OIL.

महासुगन्धितैलम् ।

कर्पूरागुरुचोचचोलनलिकाखाखाशठीधातकी-
पुष्पैः सप्तदलैलवालुसरलाशैलेयमांसीपुरैः ।
एलाकुङ्कुमरीचनादमनकग्रीवासजातीफलैः
कङ्कोलत्तसुकोजटामदसुराकान्तालवङ्गामयैः ॥
तैलोशीरहरेणुकामलयजस्थौणेयचण्डानखै-
र्जातीकोषकुलीरपद्मकनतैः स्पृक्कान्वितैः पालिकैः ।
लाक्षायोजनवल्लिलोध्रसलिले तैलं विपाच्याऽऽढकं
तेनाभ्यज्य तनुं जरन्नपि भवेत्स्त्रीणां परं वल्लभः ॥
शुक्राढ्यो द्युतिमाननल्पतनयः षण्ढोऽपि रत्युत्सुको
वन्ध्या गर्भवती भवेदपि तथा वृद्धाऽपि सूते सुतम् ।
कण्डूस्वेदविचर्चिकामयहरं दौर्गन्ध्यकुष्ठापह-
मश्विभ्यां परिकीर्तितं बहुगुणं तैलं सुगन्धं महत् ॥

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27. GUḌAKUSMĀṆDA.

गुडकूष्माण्डम् ।

कूष्माण्डकात्पलशतं सुस्विन्नं निष्कुलीकृतम् ।
प्रस्थं च घृततैलस्य ताम्रस्तप्ते प्रदापयेत् ॥
त्वक्पत्रधान्यकव्योषजीरकैलाद्वयानलम् ।
ग्रन्थिकं चव्यमातङ्गपिप्पल्यः शृङ्गवेरकम् ॥
शृङ्गाटकं कशेरु च प्रलम्बं तालमस्तकम् ।
चूर्णीकृतं पलांशं तु गुडस्य तुलया पचेत् ॥
शीतीभूते पलान्यष्टौ मधुनः संप्रदापयेत् ।
कफपित्तानिलहरं मन्दाग्नीनां च दीपनम् ॥
कृशानां बृंहणं श्रेष्ठं वाजीकरणमुत्तमम् ।
प्रमदासु प्रसक्तानां ये च स्युः क्षीणरेतसः ॥
क्षयेण च गृहीतानां परमेतद्भिषग्जितम् ।
कासं श्वासं ज्वरं हिक्कां हन्ति छर्दिमरोचकम् ॥

गुडकूष्माण्डकं ख्यातमश्विभ्यां समुदाहृतम् ।

खण्डकूष्माण्डवत्पाकं खिन्नकूष्माण्डकाद्रव: ॥

KUṢMĀṆDAKA RASĀYANA.

कुष्माण्डकरसायनम् ।

वीतत्वगस्थिकूष्माण्डतुलां खिन्नां पुन: पचेत् ।
घट्टयन् सर्पिष: प्रस्थे क्षौद्रवर्णेऽत्र च क्षिपेत् ॥
खण्डाच्छतं कणाशुण्ठ्योर्द्विपलं जीरकादपि ।
त्रिजात-धान्य-मरिचं पृथगर्धं पलांशकम् ॥
अवतारितशीते च दत्त्वा क्षौद्रं घृतार्धकम् ।
खजेनामथ्य च स्थाप्य तन्निहन्त्युपयोजितम् ॥
कासहिक्काज्वरश्वासरक्तपित्तक्षतक्षयान् ।
उर:सन्धानजननं मेधास्मृतिबलप्रदम् ।
अश्विभ्यां विहितं हृद्यं कूष्माण्डकरसायनम् ॥

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28. VṚHAT NĀRIKELA KHAṆḌA.

वृहन्नारिकेलखण्ड: ।

प्रस्थन्तु नारिकेलस्य सूक्ष्मं दृषदि पेषितम् ।
निष्कुलीकृत कुष्माण्ड खण्डानामर्द्धमाढ़कम् ।
तद्द्वयं भर्ज्जयेद्द्रव्ये घृते तु कुड़वोन्मिते ॥
ततस्तत्र क्षिपेच्छुद्धं गोदुग्धस्याढ़कोन्मितम् ।
तत्रैव नि:क्षिपेन्नव्यां सितां प्रस्थद्वयोन्मिताम् ॥
पचेत् सर्व्वाणि चैकत्र मृदुना वह्निना भिषक् ।
सुपक्वे शीतले तत्र चूर्णीकृत्य विनि:क्षिपेत् ॥
सूक्ष्मैलाधान्यकं धात्री पर्पटञ्जलदं जलम् ।
उशीरं चन्दनं द्राक्षां शृङ्गाटञ्च कशेरुकम् ॥
त्वक्पत्रकं सकर्पूरं कर्षयुग्मं पृथक् पृथक् ।
सर्व्वं संमिश्रयेद्वैद्य भाजने मृण्मये नवे ॥

पलमात्रमिदं प्रातर्भक्षयेद्वा यथानलम् ।
एतन्निषेवितं हन्ति रोगानेतान्न संशयः ॥
अम्लपित्तं ज्वरं पित्तं रक्तपित्तमरोचकम् ।
वातरक्तं तृषां दाहं पाण्डुरोगञ्च कामलाम् ॥
क्षयं क्षपयति क्षिप्रं शूलञ्च परिणामजम् ।
नारिकेलस्य खण्डोऽयमश्विभ्यां भाषितः पुरा ॥

वर्णदो बृंहणो वृष्यः पुंस्त्वनिद्रा बलप्रदः ।

29. Dāḍimādya Ghṛta.

दाड़िमाद्यं घृतम् ।

दाड़िमस्य फलप्रस्थं यवप्रस्थौ तथैव च ।
कुलत्थकुड़वञ्चापि क्वाथयित्वा यथाविधि ॥
तेन पादावशेषेण घृतप्रस्थं विपाचयेत् ।
चतुःषष्टिपलं क्षीरं क्षीरतुल्यं वरीरसम् ॥
दत्त्वा मृदग्निना कल्कैरक्षमात्रायुतैः सह ।
द्राक्षाखर्ज्जुरकाकोली-दन्तीदाड़िमजीरकैः ॥
तथा मेदामहामेदा त्रिफलादारुरेणुकैः ।
विशालारजनीदारु-हरिद्राविकषामयैः ॥
क्रिमिघ्नभूम्निकुष्माण्ड-श्यामैलाभिर्भिषग्वरः ।
पाने भोज्ये प्रदातव्यं सर्व्वर्त्तुषु च मात्रया ॥
प्रमेहान् विंशतिञ्चैव मूत्राघातांस्तथाश्मरीम् ।
कृच्छ्रं सुदारुणञ्चैव हन्यादेतद्रसायनम् ॥
शूलमष्टविधं हन्ति ज्वरमष्टविधं तथा ।
कामला पाण्डुरोगांश्च हलीमकमथारुचिम् ॥
श्लीपदञ्च विशेषेण घृतेनानेन नश्यति ।
बृंहमायुष्यमोजस्यं सर्व्वरोगहरं परम् ।
दाड़िमाद्यमिदं नाम अश्विभ्यां निर्म्मितं महत् ॥

30. ŚATĀVARĪ GHṚTA.

शतावरीघृतम् ।

शतावरीमूलशतं त्रिद्रोणेऽपां विपाचयेत् ।
अष्टभागावशेषेण घृतप्रस्थं विपाचयेत् ॥
जीवनीयानि सर्वाणि रास्ना गोक्षुरकं तथा ।
शतपुष्पा वचा कुष्ठं सरलं सपुनर्नवम् ॥
चन्दनं तगरं मांसी पद्मकं रक्तचन्दनम् ।
सुरसं नागरं कृष्णा विडं नागरमुत्पलम् ॥
एभिरक्षसमैर्भागैः क्षीरं दद्यात्चतुर्गुणम् ।
बृंहणं वातपित्तघ्नं क्षतशोषज्वरापहम् ॥
पङ्गूनां पृष्ठसर्पिणामर्दितानां च शस्यते ॥
पुंस्त्वोपघातिनां नृणां वन्ध्यानां चैव योजितम् ॥
बलवर्णकरं हृद्यं तदलक्ष्मीघ्नं प्रजाकरम् ।
शतावरीघृतमिदमश्विभ्यां परिकीर्तितम् ॥

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31. HIṄGVĀDYA POWDER.

हिङ्ग्वाद्यं चूर्णम् ।

हिङ्गुग्रन्थिकधान्यकाग्निकवचाचव्याग्निपाठाः शठी
वृक्षाम्लं लवणत्रयं त्रिकटुकं क्षारद्वयं दाड़िमम् ।
पथ्यापुष्करवेतसाम्लहपुषाजाज्याजगन्धैः कृतं
चूर्णं भावितमेतदार्द्रकरसै स्याद्बीजपूरस्य च ॥
आध्मानग्रहणीविकारगुदजान् गुल्मानुदावर्तकान्
प्रत्याध्मानगरोदराश्मरिरुजस्तूणीद्वयारोचकान् ।
ऊरुस्तम्भमतिभ्रमं च मनसो बाधिर्यमष्ठीलिकां
प्रत्यष्ठीलिकया सहापहरति प्राक्पीतमुष्णाम्बुना ॥
रुक् त्रिकवङ्क्षणकटीजठरान्तरेषु
बस्तिस्तनांसफलकेषु च पार्श्वयोश्च ।
शूलानि नाशयति वातबलासजानि
हिङ्ग्वाद्यमाद्यमिदमाश्विनसंहितायाम् ॥

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32. DAŚĀṄGA OIL.

दशाङ्गतैलम् ।

शैरेयकोऽमृतलता वाजिगन्धा शतावरी ।
प्रसारणी नागबला श्वदंष्ट्रा सपुनर्नवा ॥
बला चेति समान् भागान् रास्नारससमन्वितान् ।
विज्ञाय दोषप्रकृतिं कषायमुपकल्पयेत् ॥
तेन पादावशेषेण तिलतैलाढकं पचेत् ।
दधिमस्त्विक्षुनिर्यासशुक्ताम्लाचोदकैः समैः ॥
चतुर्गुणेन पयसा कल्कैरेभिः पलोन्मितैः ।
मांसीशताह्वामधुकमञ्जिष्ठारक्तचन्दनैः ॥
शतावरीदेवदारुकौन्तीत्वक्पत्रवारिजैः ।
कुष्ठागरुवचायुक्तैस्तैलं सिद्धं प्रदापयेत् ॥
वस्तौ पाने तथाऽभ्यङ्गे नस्ये च परिषेचने ।
सर्वरोगान् जयत्येतत्संसृष्टान् मातरिश्वना ॥
विशेषतो ह्यपस्मारमुन्मादं वातशोणितम् ।
स्त्रीणामपत्यजननं पुंसां चातिबलप्रदम् ॥
नराणां गद्गदानां च मूकानां वाक्प्रवर्तनम् ।
मेधाजननमायुष्यं बलवर्णाग्निवर्धनम् ॥
सर्वग्रहघ्नं विषजित् सन्निपातहरं परम् ।
दशाङ्गमिति विख्यातमश्विभ्यां परिकीर्तितम् ॥

33. VṚHAT AGNIMUKHA POWDER.

बृहदग्निमुखं चूर्णम् ।

द्वौ क्षारौ चित्रकं पाठा विडङ्गं लवणानि च ।
सूक्ष्मैला तगरं भार्गी कारवी हिङ्गु पौष्करम् ॥
शठी दार्वी त्रिवृन्मुस्ता वचा चेन्द्रयवास्तथा ।
धात्रीजीरकवृक्षाम्लश्रेयस्यः सोपकुञ्चिकाः ॥

अम्लवेतसमम्लीका दाड़िमं सकटुत्रयम् ।
भल्लातकाजमोदं च यवानी सुरदारु च ॥
अभयाऽतिविषा चव्या हपुषारग्वधस्तथा ।
तिलमुष्ककशिग्रूणां कोकिलाक्षपलाशयोः ॥
क्षाराण्यमूनि तुल्यानि सूक्ष्मचूर्णानि कारयेत् ।
लोहकिट्टं च सप्ताहं तप्तं गोमूत्रसेचितम् ॥
विशान्सुभावितं कृत्वा योगेऽस्मिन्प्रक्षिपेत्ततः ।
मातुलुङ्गरसेनैव भावयेत्तु दिनत्रयम् ॥
दिनत्रयं तु शुक्तेन तथाऽऽर्द्रकरसेन च ।
सुभावितं ततः कृत्वा भक्तमध्ये प्रयोजयेत् ॥
एषोऽग्निकल्पचूर्णस्तु नाशयत्यचिराद्गदान् ।
अजीर्णकं तथाऽऽनाहं पञ्च गुल्मान् सुदुस्तराम् ॥
ग्रहणीपाण्डुरोगांश्च श्वासकासांश्च दारुणाम् ।
अपस्मारं तथोन्मादं विभ्रमं च मदात्ययम् ॥
प्रणुदत्युल्वणानेतान्नष्टमग्निं च दीपयेत् ।
समस्तव्यञ्जनोपेतं भक्तं कृत्वा तु भोजने ॥
प्रदद्यादस्य चूर्णस्य विड़ालपदकं भिषक् ।
ततस्तद्द्रवतां याति क्षीणत्वं च प्रपद्यते ॥
एतदग्निमुखं षष्ठं चूर्णराजो निगद्यते ।
ब्रह्मणा निर्मितं ह्येतदश्विभ्यां परिकीर्तितम् ॥

34. CITRAKA-HARITAKĪ AVALEHA.

चित्रकहरीतक्यवलेहः ।

चित्रककषायपलशतमम्लताधात्रीरसं च तुल्यांशम् ।
संमिश्य गुडशतं च हि द्विपञ्चमूलीकषायेण ॥
तत्तुल्येन हरीतक्याढकमेकं विपाच्य गुड़पाकम् ।
अर्धप्रस्थं मधुनस्तस्मिन्दत्त्वा ततोऽन्येद्युः ॥
द्वे द्वे पले निदध्यादेलात्वक्पत्रत्रिकटुकानाम् ।
यवक्षारार्धपलं यथाग्नि पश्चात्प्रयुञ्जीत ॥

एतद्रसायनोत्तममश्विभ्यामश्विहृदये प्रोक्तम् ।

उपयुक्तवतां पुंसामपि काष्ठतृणानि जीर्यन्ति ॥
अर्शःश्वासभगन्दरकासक्रिमिशोफकुष्ठगुल्मांश्च ।
मासद्वयोपयोगाद्विनाशयत्यन्तवृद्धिमपि ॥
रोगानीकसमेतं विशेषतो हन्ति राजयक्ष्माणम् ।
अजितमपि भिषक्शतैः पीनसरोगं चाग्रहाज्जयति ॥

35. HARITAKĪ AVALEHA.

(This formula has been quoted in page 110.)

HARITAKĪ AVALEHA II.

द्वितीयचित्रकहरीतक्यवलेहः ।

चित्रकपलशतमभिनवमाहृत्य कषायमेव कुर्वीत ।
धात्रीरसस्य पलशतममृतायाः स्वरसमेव तत्तुल्यम् ॥
दशमूलस्य पलशतमष्टाविंशत्तथा जलद्रोणे ।
अभयाढकं च भिषजा साध्यं पूते कषायेऽस्मिन् ॥
शुद्धगुडस्य शतं स्याद्रसेन चालोड्य सपदि तत्रैव ।
अभयाश्च ताः समस्ता मृदुना ज्वलनेन मार्दवं नेयाः ॥
मधुनः पलानि षोडश तस्मिन्देयानि शीतलीभूते ।
त्वक्पत्रमरिचकेसरमागधिकैलापले द्वे स्युः ॥
यवक्षारपलैकमेतत्प्राश्याग्निमात्रया विद्वान् ।
जरयति तृणकाष्ठान्यपि विसप्तदिवसोपयोगेन ॥
कासश्वासभगन्दरकुष्ठान्यष्टादशोदराण्यष्टौ ।
मासोपयोगादेतत्क्षतचयं हन्ति राजयक्ष्माणम् ॥१२९॥
षण्ढोऽप्यषण्ढतां च याति वर्षमात्रोपयोगेन ।
सुरलोकरोगनिचयप्रशमनकरणैकसत्यमाहात्म्यौ ॥
दिव्यं रसायनमिदं कृतवन्तावश्विनी देवौ ।

36. CITRAKA AVALEHA.

चित्रकावलेहः ।

वह्निद्विपञ्चमूलस्य क्वाथे पलशतद्वये ॥
अमृताया * रसस्यैके पूतेऽस्मिन्नभयाशतम् ।
पचेद्गुडतुलां तावद्यावद्दापाकलक्षणम् ॥
अन्येद्युस्तत्र मधुनः सुशीते कुडवद्वयम् ।
प्रक्षिपेत्त्रिसुगन्धस्य त्रिकटोश्च पलद्वयम् ॥
प्रत्येकं स्याद्यवक्षारः शुक्तिस्त्वस्य रसायने ।
उत्तमं कथितं पुंसामश्विभ्यामग्निवृद्धये ॥

जीर्णान्यपि च काष्ठानि कासश्वासक्षयक्रमीन् ।
गुल्मोदरार्शःकुष्ठं च जयेच्छोषं भगन्दरम् ॥
योगशतैरप्यजितं त्र्यहाज्जयति पीनसम् ।

37. SVALPA KADALĪKANDA GHṚTA.

स्वल्पकदलीकन्दघृतं ।

कदलीकन्द निर्यासे तत्प्रसून तुलां पचेत् ।
तेन पादावशेषेण वस्त्रपूतेन यत्नतः ॥
लवङ्गं कदली देवकाष्ठं मधुरिकान्तथा ।
रजनी चविकाजाजी नागरं त्रिफला कणा ॥
दाडिमस्य च बीजानि यमानी धान्यकन्तथा ।
त्वचाश्च भकशाद्राक्षासिन्धूद्भवसमन्वितैः ॥
कल्कैरक्षसमैरेभि घृतप्रस्थं विपाचयेत ।
पानभोज्ये प्रदातव्यं सर्व्वत्र हितमात्रया ॥
प्रमेहान् विंशतिश्चैव दाह शोष तृषा क्षया ।
विवर्णानाहशूलघ्नं कामलाज्वरनाशनं ॥
वातरोगं निहन्त्याशु वृक्षमिन्द्राशनिर्यथा ।
कादलीकन्दकं नाम अश्विभ्यां निर्म्मितः पुरा ॥४९॥

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* 'पलशते' इति शेषः ।

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38. Ayopati Rasa.

अयःपतिरसः ।

त्रिहता सर्वभागानि सर्वं सर्वं च शर्करा ॥
उष्णोदकानुपानेन इच्छाभेदी रसः स्मृतः ।
अयःपतिरसो नाम अश्विनीदेवनिर्मितम् ॥

39. Mārtaṇda Rasa.

मार्त्तण्डरसः ।

बहुमूत्रहरं चैव तिलपिष्टेन संयुतम् ॥
मार्जारग्रन्थिरोगाणां गुलुचीमरिचं तथा ।
शुक्रवह्निस्तम्भमूलमिक्षुरस्वरसं तथा ॥
आरुची आर्द्रकं चैव जीरकं चूर्णसंयुतम् ।
पेरङ्गी व्याधिमूलेन अपत्यं हितमेव च ॥
भरणीचणकाज्येन सर्वरोगो व्यपोहति ।
मार्तण्डरसनामायमश्विनीदेवनिर्मितः ॥

40. Vāla Sūryyodaya.

वालसूर्योदयः ।

मणिराजस्तं नागं वैगन्धरसं समम् ।
स्वर्णप्रभं गन्धकार्धं तदर्धं करवीरकम् ॥
सु ……… कुसुमद्रावैः कुमारीरसमेव च ।
जम्बीराम्लेन प्रत्येकं मर्दितं च दिने दिने ॥
मूषायां निक्षिपेत्सर्वं वालुकायन्त्रपाचितम् ।
गुञ्जामात्रप्रयोगेण विंशतिर्मेहकृच्छ्रकम् ॥
मूत्रकृच्छ्राणि सर्वाणि द्वादशं क्षयमेव च ।

* * *

वालसूर्योदय नाम अश्विनीदेवनिर्मितम् ॥

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CHAPTER IV

KAŚYAPA

Kaśyapa's father was the sage Marīcī and his mother Kalā. He married the seventeen daughters of Dakṣa, and became the progenitor of all living beings:

	Name of wife.	Sons.
1.	Aḍiti	Devas (Gods)
2.	Diti	Daityas (Asuras)
3.	Danu	Dānavas (Demons)
4.	Kāśṭhā	Aśvas (Horses)
5.	Ariṣṭā	Gandharvas
6.	Surasā	Rākṣasās
7.	Ilā	Vṛkṣa (Trees)
8.	Muni	Apsarās
9.	Krodhavaśā	Sarpas (Snakes)
10.	Tāmrā	Syena, Gṛdhras (Falcons)
11.	Surabhi	Go-Mahiṣas (Cows)
12.	Saramā	Śvāpadās (Dogs)
13.	Timi	Jādos (Fishes)
14.	Vinatā	Garuḍa Aruna (Sun)
15.	Kadru	Nāgās (Serpents)
16.	Patangi	Patangas (Insects)
17.	Jāmini	Śalabhās (Locusts).

Kaśyapa is the name of an ancient physician who was present in the meeting of the sages mentioned in Caraka Saṁhitā I. i. In IV. vi, Kaśyapa appears to have solved the problem in relation to the part formed first in a fœtus. He said: "All parts of the fœtus are formed

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simultaneously and the development of the parts are interdependent."

कश्यपः सर्व्वाङ्गनिर्व्वृत्तिरिति । तदुपपन्नं सर्व्वाङ्गानां तुल्यकालाभिनिर्व्वृत्तत्वात् हृदयप्रभृतीनाम् । सर्व्वाङ्गानां ह्यस्य हृदयं मूलमधिष्ठानञ्च केषाञ्चिद्भावानां न च तस्मात् पूर्व्वाभिनिर्व्वृत्तिरेषान्तस्माद्धृदय पूर्व्वाणां सर्व्वाङ्गानां तुल्यकालातिनिर्वृत्तिः सर्व्वाभावा ह्यन्योन्यप्रतिबद्धास्तस्माद् यथाभूतं दर्शनं ।

In Aṣṭāṅga Hṛdaya Saṁhitā VI. ii, he is called Vṛddha Kaśyapa or Kaśyapa the old, and therein a formula is ascribed to him as a remedy against children's diseases caused by teething. Similarly in VI. iii, a formula of his is quoted as a remedy against "Vālagraha" or "demoniacal seizure of children." From these facts, it becomes apparent that Kaśyapa was a specialist in pediatrics. Again in the Bower Ms., there is a formula to give relief to children suffering from gravel, stone, strangury and morbid secretion of urine. This is also ascribed to him.

Hoernle thinks Kāśyapa and Kaśyapa are the names of the same ṛshi; but in Caraka Saṁhitā, I. i. both the sages are separately mentioned and we find Kaśyapa quoted in Caraka Saṁhitā, IV. vi and Aṣṭāṅga Hṛdaya Saṁhitā, VI. ii and VI. iii (see footnote) Bower Ms., p. 170).

Formulæ: The following formulæ are ascribed to Kaśyapa.

1.

समङ्गा-धातकी-लोध्र-कुटन्नट-बलाह्वयैः ।
महासहा-क्षुद्रसहा-क्षुद्रबिल्वशलाटुभिः ॥
सकार्पासीफलैस्तोये साधितैः साधितं घृतम् ।
क्षीरमस्तुयुतं हन्ति शीघ्रं दन्तोद्भवोद्भवान् ।
विविधानामयानेतद् वृद्धकाश्यपनिर्मितम् ॥

Aṣṭāṅga Hṛdaya Saṁhitā, VI. ii, p. 28, v. 42.

2. Daśāṅga Dhupa.

दशाङ्ग धूपम् ।

वचा-हिङ्ग-विड़ङ्गानि सैन्धवं गजपिप्पली ।
पाठा प्रतिविषा व्योषं दशाङ्ग कश्यपोदित: ॥

Ibid, VI, iii, p. 29, v. 46.

This formula is another recension of Dasāṅgamagada, quoted on page 185 and ascribed to Kāśyapa in the Bower Ms.

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KĀŚYAPA, THE ELDER

Kāśyapa is the name of an ancient physician. He is the son of Kaśyapa and is the founder of the clan (गोत्र) which still bears his name. According to Trikāṇḍaśeṣa, Kāśyapa is the name of sage Kaṇāda, the founder of the atomic theory. In the Caraka Saṁhitā I. i, his name appears in the list of sages who were desirous of learning the medical science.

विघ्नभूता यदा रोगाः प्रादुर्भूताः शरीरिणाम् ।
तपोपवासाध्ययनब्रह्मचर्य्यव्रतायुषाम् ॥
तदा भूतेष्वनुक्रोशं पुरस्कृत्य महर्षयः ।
समेताः पुण्यकर्म्माणः पार्श्वे हिमवतः शुभे ॥
अङ्गिरा जमदग्निश्च वशिष्ठः काश्यपो भृगुः ।
आत्रेयो गौतमः साङ्ख्यः पुलस्त्यो नारदोऽसितः ॥
अगस्त्यो वामदेवश्च मार्कण्डेयाश्वलायनौ ।
पारिक्षिर्भिक्षुरात्रेयो भरद्वाजः कपिञ्जलः ॥
विश्वामित्राश्मरथ्यौ च भार्गवश्च्यवनोऽभिजित् ।
गार्ग्यः शाण्डिल्यकौण्डिन्यौ वार्क्षिर्देवलगालवौ ॥
साङ्कृत्यो बैजवापिश्च कुशिको बादरायणः ।
बडिशः शरलोमा च काप्यकात्यायनावुभौ ॥
काङ्कायनः कैकशेयो धौम्यो मारीचिकाश्यपौ ।
शर्कराक्षो हिरण्याक्षो लोकाक्षः पैङ्गिरेव च ॥
शौनकः शाकुनेयश्च मैत्रेयो मैमतायनिः ।
वैखानसा वालखिल्यास्तथा चान्ये महर्षयः ॥

In I. xii he is again referred to as holding a discussion with the other sages on the qualities of Vāyu and as having

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put forward the view that Soma is the real cause of health and disease by its action on the phlegm of the body. The healthy and the diseased conditions are : Firmness and laxity, growth and leanness, activity and idleness, virility and impotence, knowledge and ignorance, etc.

तच्छ्रुत्वा मारीचिवचः काश्यप उवाच। सोम एव शरीरे श्लेष्मान्तर्गतः कुपिताकुपितः शुभाशुभानि करोति। तद्यथा—दार्ढ्यं शैथिल्यमुपचय कार्श्यमुत्साहमालस्यं वृषतां क्लीवतां ज्ञानमज्ञानं बुद्धिं मोहमेवादीनि चापराणि द्वन्द्वादीनीति।

He is quoted in the Nivandha Saṁgraha, Vyākhyā Kusumāvalī, Vākhyā Madhukoṣa, and the Bower Ms.

KĀŚYAPA IN NIVANDHA SAṀGRAHA.

1. न शिरा-स्नायु-सन्ध्यस्थिमर्मस्वपि कथञ्चन।
दंशस्योत्कर्त्तनं कार्य्यं दाहो वा भिषजाऽग्निना॥

2. अरजस्कां यदा नारीं श्लेष्मरेता व्रजेद्दती।
अन्यसक्ता भवेत् प्रीतिर्ज्जायेते कुम्भिलस्तदेति॥

KĀŚYAPA IN VĀKHYĀ KUSUMĀVALĪ.

1. नाधोयाति न चाप्यूर्ध्वमाहारो न च पच्यते।
स कोष्ठस्थोऽलसीभूतस्तेन सोऽलसकः स्मृतः।
यदि वाऽलसके दोषाश्छर्द्यतीसारवर्जिताः।
कारकास्तीव्रशूलादेः स्रोतसः सन्निरोधकाः।
तिर्य्यग्यान्तस्तनुं स्तब्धां दण्डवत्स्तम्भयन्ति चेत्।
स दण्डालसकस्त्याज्यः शीघ्रं देह विघातकृत्॥

2. विडङ्गव्योषपूतीकवराहिंस्राग्निभिः पचेत्।
कार्षिकैः सर्पिषः प्रस्थं क्षीरं चतुरस्य च।
तत्पानाच्छ्वासकासघ्नं शीघ्रदुर्नामगुल्मनुत्॥
Vṛddha Kāśyapa

3. See 2, Ni. S.

4. वमस्यान्वासनं दत्तं न सम्यक् परिपच्यते।

Kāśyapa in Vākhyā Madhukoṣa.

1. संयोगजश्च द्विविधं तृतीयं विषमुच्यते ।
गरः स्यादविषस्तच्च सविषं कृत्रिमं मतम् ॥

Vṛddha Kāśyapa.

Kāśyapa in Bower Ms., vv. 1010-1040.

1. मुहुस्तु गुड़िकामेकां कुमाराय प्रदापयेत् ।

2. अतिसारेषु बालानां गुड़िकां दापयेद्भिषक् ॥
तण्डुलोदकसंयुक्तां क्षौद्रेण सह दापयेत् ।
परूषकरसैर्युक्तां शर्कराक्षौद्रसंयुताम् ॥

3. छर्द्दयानस्य बालस्य गुड़िकां दापयेद्भिषक् ।
गुडूचिरससंयुक्तां शर्कराक्षौद्रसंयुताम् ॥
अथवा पक्वलोष्टस्य प्रसादेन प्रदापयेत ।
शर्कराक्षौद्रसंयुक्तां तथा सम्पादयेत् सुखी ।

4. रक्तातिसारे बालानां गुड़िकां दापयेद्भिषक् ।
पञ्चवल्ककषायेण तण्डुलानाम् रसेन वा ॥
शर्कराक्षौद्रसंयुक्तां शशस्य रुधिरेण वा ।
ऐणेयहरिणाभ्यां वा रक्तैर्मधुमिश्रितैः ॥

5. उदावर्त्तेषु बालानां गुड़िकां दापयेद्भिषक् ।
गुड़ोदकेन संयुक्तां त्रिफलाया रसेन वा ॥

6. आमातिसारे बालानां गुड़िकां दापयेद्भिषक् ।
दधिमण्डेन संयुक्तां तिन्तिड़िकारसेन वा ॥

7. शर्करा चाश्मरी चैव मूत्रग्राहे प्रमेहिषु ।
गुड़िकां दापयेद्वैद्यो मधनाय प्रसन्नया ॥
आसवेन सुजातेन बालानां दापयेद्भिषक् ।
सुखं भवति तेनास्य काश्यपस्य वचो यथा ॥

तेन कोष्ठागतो जन्तुः क्षिप्रमेव प्रमुच्यते ।
शिरोरोगेषु शमनं वमनं चैव शाम्यति ॥
क्रिमिर्गुदगतो यस्य गुड़िकाया प्रलेपयेत् ।
तेनास्य सौख्यं भवति काश्यपस्य वचो यथा ॥

8. अविज्ञातेषु रोगेषु गुड़िकां दापयेद्भिषक् ।
सुखोदकेन संयुक्तां सर्व्वरोगविनाशनीम् ॥
समीक्ष्य कुशलो वैद्यः कुर्व्वीत विविधाः क्रियाः ।
वलावलञ्च वालानामृतुं कालं समीक्ष्य च ॥
क्रियां पञ्चविधां वैद्यो धात्रीणामुपपादयेत् ।
विरेकम् वमनं चैव तथैवाप्यनुवासनं ॥

9. परिकर्त्तिकासु वालानां गुड़िकां दापयेद्भिषक् ।
वराहविष्ठा संयुक्तान्तथा तण्डुलधावनैः ॥
शर्कराक्षौद्रसंयुक्तां पाययीत चिकित्सकः ।
सुखी भवति तां पीत्वा काश्यपस्य वचो यथा ॥

10. हिक्काश्वासेषु कासेषु गुड़िकां दापयेद्भिषक् ।
मातुलुङ्गेन संयुक्तां गन्धसौवर्च्चलेन वा ॥

11. जन्तुभिर्वध्यमानस्य गुड़िकां दापयेद्भिषक् ।
दाड़िमोदकसंयुक्तां मधुनाथ प्रसन्नया ॥
यथा शिरोविरेकांश्च लेहाग्रव्यञ्जनानि च ।
भुज्यतां भोजनं चैषा यवागुर्लघुभोजनम् ॥

12. कामलापाण्डुरोगेषु श्वयथूनां तथैव च ।
युक्तां पिलुकषायेण गुड़िकां दापयेद्भिषक् ॥

13. रोहिण्यां तालुशोषे वा गलगण्डोपजिह्विके ।
चूर्णिताम् गुड़िकां दद्याद्दन्तमांसं च पीड़येत् ॥
सुखेन दन्ता जायन्ते श्वयथुश्चोपशाम्यति ।
तेनास्य रोगाः शाम्यन्ते आरोग्यञ्चाधिगच्छति ॥

14. दद्रुकुष्ठकिलासानां पामास्वथ विचर्च्चिके ।
त्वग्गतेषु च रोगेषु गुड़िकां दापयेद्भिषक् ।
कम्पिल्याच्च चूर्णानि चूर्णानि गुड़िकायाश्च ।
पिष्ट्वा सर्षपतैलेन तेनैनमनुलेपयेत् ॥
गोमूत्रेन सुखोष्णेन खदिरेन रसेन वा ।
सेच्य निम्बकषायेण तेन सम्पद्यते सुखी ॥

15. छाया वा पूतना वापि यस्य वाप्युपरिग्रहः ।
वस्तमूत्रेण संयोज्य गुड़िकां तस्य दापयेत् ॥
अथवा कल्कपिष्टायां गुड़िकायां प्रलेपयेत् ।
तथा सर्व्वग्रहास्तस्य प्रशामयन्ति सुदारुणाः ॥

16. पार्श्वशूलेषु वालानां गुड़िकां दापयेद्भिषक् ।
कुलत्थरससंयुक्तां युक्तां मांसरसेन वा ॥
धात्र्याः शुद्धशरीरायाः दोषाः शाम्यन्ति दारुणाः ।
वालं वर्णश्च वालायां क्षिप्रं समुपजायते ॥

काश्यपिया गुड़िका ॥

The following formulæ are attributed to **Kāśyapa** :—

1. Dasāṅgamagada :—

वचाहिङ्गुविड़ङ्गानि सैन्धवं गजपिप्पली ।
पाठा प्रतिविषा व्योषं काश्यपेन विनिर्म्मितं ॥
दशाङ्गमगदं पीत्वा सर्व्वकीटविषं जयेत् ॥

2. Traiphala Ghṛta.—C.D.—p. 310.

त्रैफलं घृतम् —

त्रिफला त्र्यूषणं द्राक्षा मधुकं कटुरोहिणी ।
प्रपौण्डरीकं सूक्ष्मैला विड़ङ्गं नागकेशरम् ॥
नीलोत्पलं शारिवे द्वे चन्दनं रजनीद्वयम् ।
कार्षिकैः पयसा तुल्यं त्रिगुणं त्रिफलारसम् ॥

घृतप्रस्थं पचेदेतत् सर्व्वनेत्ररुजापहम् ।
तिमिरं दोषमास्रावं कामलाकाचमर्व्वुदम् ॥
वीसर्पं प्रदरं कण्डुं रक्तं श्वयथुमेव च ।
खालित्यं पलितञ्चैव केशानां पतनं तथा ।
विषमज्वरमर्म्माणि शुक्रञ्चाशु व्यपोहति ॥
अन्ये च वहवो रोगा नेत्रजा ये च वर्त्मजाः ।
तान् सर्व्वान् नाशयत्याशु भास्करस्तिमिरं यथा ।
न चैवाख्यात् परं किञ्चिदृषिभिः काश्यपादिभिः ।
दृष्टिप्रसादनं दृष्टं यथा स्यात् त्रैफलं घृतम् ॥

Books :—

1. Kāśyapa Tantra : This work is quoted in Nivandha Saṁgraha, vi-xxvii. काश्यपादितन्त्रान्तरोक्ताधिकसंख्या निराकरणार्थं । But there is no Ms. of the book known to scholars.

2. In G.O.M.L., Vol. xxiii, No. 13112, we find a manuscript described as **No. 13112**. काश्यपीयरोगनिदानम्.

KĀŚYAPĪYAROGANIDĀNAM.

Incomplete.

Gives the varieties and the distinguishing characteristics of different maladies, the method of diagnosing them and also the remedial medicines. The work is attributed to Kāśyapa.

Beginning:

विंशतिश्लेष्मनिदानम्—

पित्तरक्तं च शीतं च श्वेतग्रन्थिं च श्लेष्मकम् ।
...... श्लेष्मं दुर्गन्धं जिह्वमूलकम् ॥
कासश्लेष्मं पार्श्वशीर्षम् श्रीकारं श्लेष्मिकं विधा ।
दीर्घश्लेष्मं सान्द्रश्लेष्मं तन्तुश्लेष्मं च पूर्वकम् ॥

* * * * *

पित्तशूले अनिदानम्—

पित्तवर्णं शूले अरूपं.........ग्रन्थिरूपकम् ।
हृद्दलं · कण्ठशूलं च पित्तशूले आस्य लक्षणम् ॥

* * * * *

Colophon :

इति विंशतिशूले अनिदानं संपूर्णम् ।

End :

शङ्खद्रावं शिवक्वाथं सर्वरोगेषु योजयेत् ।
कुष्टमष्टादशं चैव लेपमात्रेण नश्यति ।
दुष्टव्रणानि गीर्वाणि···मावांभिशास्यते ।
शुवानिविविधानं च (?) अनुपानविशेषणम् ।
सर्वरोगविनिर्मुक्तः काश्यपर्षिभाषितम् ॥

Books :

Kāśyapa Samhitā : A work called by this name and apparently ascribed to Kāśyapa is noted in Burnell Catalogue of Tanjore Mss. In Aufrecht's Catalogues Catalogorum, p. 88, the same Ms. is called Kaśyapa Samhitā.

काश्यपसंहिता Kāśyapa Saṁhitā : Ms. : Burnell Catalogue of Tanjore Mss., No. XLI, p. 70.

Beginning :

कैलासशिखरे रम्ये पार्वतीपरमेश्वरौ ।
अन्योन्यसुखलीलायां एकान्ते सुखगोष्ठिषु ॥
पार्वती पतिं आलोक्य कृताञ्जलि रभाषत ।
देवेश जगदाधार सर्व्वभूतमयात्मक ॥
मम प्राणेश नाथाय सर्वलोकजगद्गुरो ।
भूतं भविष्यत् कर्माऽपि त्वयाधीनम् च सर्वशः ॥
तव प्रसादच्छास्त्रार्थम् वेदसारम् श्रुतम् मया ।
कश्चिद् दिव्यम् ममाऽकाङ्क्षा श्रोतुम् इच्छामि शङ्कर ॥

"Siva then gives an account of diseases and their causes and cure. Sin (pāpa) is the cause, and therefore (as might be supposed) the treatment is much mixed up with religious observances. The diseases are classified very minutely, *e.g.*, 20 kinds of kuṣta, 12 of gulma, etc."

SOMA

In the Ṛgveda Soma is the juice of a milky climbing plant (*Asclepias acida*) extracted and fermented to form a beverage, liked by the gods and priests. There are many hymns (Ninth maṇdala) devoted to its manufacture and praise. Gradually Soma was deified as a god, powerful, capable of healing diseases, and bestower of worldly fortunes. Latterly, Soma became a synonym of the moon (latest hymns of Ṛgveda; and Atharva Veda), which was hence called Oṣadhī-pati or Lord of herbs; and Soma became the guardian of the healing herbs.

The Soma or moon plant is said to be produced on the Mujavat mountain (Rv. x. 34).

The juice is described as sweet (ix, 62, 21), honied (ix 63, 3, 16), pungent, flavoured and exhilarating (vi. 47, 1, 2). It stimulates voice and calls forth ideas (*ibid*, 3). In viii, 48, 3, it is said to confer immortality. In x. 44, 4, the juice is said to nourish the body.

The plant has been identified as *Acido Asclepias.* Some consider it to be *Semitia Genia*, while others think it to be *Sarcostema Viminalis.* But the Vedic plant is still unknown.

It is said to have been brought by a falcon (i, 80, 2; ii, 43, 7; ix, 48, 3; 62, 4), or by a bird or Suparnā to Indra (viii, 89, 8; ix, 48, 4) from the sky (iv, 26, 6) or from a mountain (i, 93, 6; iii, 48, 2; v, 43, 4; ix, 18, 1; 62, 4; 85, 10; 98, 9) where Varuṇa had placed it (v, 85, 2), or by the daughter of the Sun from the place where the rain-god Parjanya, the father of Soma (ix, 62, 3) nourished it when it was taken by the Gandharvas (ix, 113,

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3; S. P. Br., iii, 4, 3, 13; vi, 2, 2-18; ix, 3, 18; Tait. S., vi, 1, 6, 1,5). In the Atharva Veda xix, 6, 16, he is said to have sprung from Puruṣa. A Gandharva is said to be its protector (ix, 83, 4; 85, 12) Vibhāvasu by name, who robbed Gāyatrī when she was carrying Soma from sky for the Devas. (S. P. Br., iii, 2, 4, 1, ff.) From him the gods bought King Soma in exchange of Vach who transformed herself into a female (Ait. Br., i, 27). She was allowed to come back on account of her good songs.[1]

The manufacture of the Soma juice is thus described :—

The Soma plants are pressed by the stones and the juice flows through the woolen strainer into the wooden vats, in which it is finally offered as a beverage to the gods on a litter of grass. The stones used in pounding the shoots on a skin "chew him on the hide of a cow." It is purified by ten maidens, *i.e.*, ten fingers.[2] A more detailed and complete account of the preparation of the Soma juice by fermentation is described in Hillebrandt's Vedische Mythologie, Vol. I, according to methods given in the Vedic texts. The Soma-oblations are directed to be made thrice daily : to Agni in the morning, to Indra at mid-day and to the Ṛbhus at evening.

Properties ascribed to Soma juice :—

"The juice of the plant is said to be an immortal draught (i, 84, 4) which the gods love (ix, 85, 2; 109, 15) to be medicine for a sick man (viii, 61, 17). All the gods drink of it (ix, 109, 15). The god who is its personification is said to clothe whatever is naked, and to heal whatever is sick; through him the blind sees, and the lame walks abroad (viii, 68, 2; x, 25, 11). He is the guardian of men's bodies, and occupies their every member (viii, 48, 9)."[1]

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[1] Taitt. Br., vi. 1. 6. 5.

[2] *Ibid.*

"The exhilarating and invigorating action of Soma led to its being regarded as a divine drink that bestows everlasting life. Hence it is called *amṛita*, the "immortal" draught (allied to the Greek *ambrosia*). Soma is the stimulant which conferred immortality upon the gods. Soma also places his worshipper in the imperishable world where there is eternal light and glory, making him immortal where King Yama dwells. Thus Soma naturally has medicinal power also. It is medicine for a sick man, and the god Soma heals whatever is sick, making the blind to see and the lame to walk." "A comparison of the *Avesta* with the *Rigveda* shows clearly that soma was already an important feature in the mythology cult of the Indo-Iranian age. In both it is described as growing on the mountains, whence it is brought by birds; in both it is king of plants; in both a medicine bestowing long life and removing death. In both the sap was pressed and mixed with milk; in both its mythical home is heaven, whence it comes down to earth; in both the draught has become a mighty god; in both the celestial Soma is distinguished from the terrestrial, the god from the beverage. The similarity goes so far that Soma and Haoma have even some individual epithets in common."[2] Thus the deification of the intoxicating Soma must have taken place at a date earlier than the composition of the Vedas themselves.

Max Müller says: "Haoma tree might remind us of the tree of life, considering that Haoma, as well as the Indian Soma, was supposed to give immortality to those who drank its juice."[3]

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[1] Muir's Sanskrit Texts, Vol. V, p. 265.

[2] Macdonell's Sanskrit Literature, pp. 98-100.

[3] Chips from German Workshop Vol. I.

M. Blavatsky remarks : "Plainly speaking Som is the fruit of the tree of knowledge forbidden by the zealous Elohim to Adam and Eve or Yahir lest man should become as one of us"[1]

Divine powers : He is Asura, or divine (ix, 73, 1 ; 74, 7) and the soul of sacrifice (ix, 2, 10 ; 6, 8). He is immortal (i, 43, 9), confers immortality on gods and men (i, 91, 1, 6. 18 ; viii, 48, 3 ; ix, 106, 8 ; 108, 3 ; 109, 3) and gives felicity in heaven (ix, 113, 7, 8).

Relations to gods: Soma exhilarates Varuna, Mitra, Indra, Viṣṇu, the Maruts, the other gods, Heaven and Earth (ix, 90, 5 ; 97, 42). The Ādityas are strengthened by him and the earth made vast (x, 85, 2). Both gods and men resort to him, as his juice is sweet (viii, 48, 1). He is the friend of Indra (iv, 28, 1, 2 ; ix, 76, 2 ; 85, 3), rides in his chariot (ix, 87, 9 ; 103, 5), and helps him in his conflicts with Vṛtra (ix, 61, 22), whom he is said to have slain (i, 95, 5 ; ix, 24, 6 ; 25, 3, 9 ; 28, 3).

He is Prajāpati, lord of creatures (ix, 5, 9 ; 62, 14), the creator and father of gods (ix, 42, 4 ; 86, 10 ; 87, 12: 109, 4), the generator of hymns, of Daus, of Prithivi, of Agni, of Sūrya, of Indra, and of Viṣṇu (ix, 96, 5). He created Sun (vi, 44, 23 ; ix, 61, 16 ; 97, 41 ; 107, 7 ; 110, 3) and so dispelled darkness (i, 91, 22 ; vi, 39, 3 ; ix, 66, 24). He stretched out the atmosphere (i, 91, 22 ; vi 47, 3f), and with the fathers, the sky and the earth (viii, 48, 13), which they sustain and keep apart (vi, 44, 24 ; 47, 5 ; ix, 87, 2 ; 89, 6 ; 109, 6). He produced the two divine worlds (ix, 98, 9). He is king of gods and men (ix, 97, 24), and is elevated over all beings like sun (ix, 54, 3) ; and he holds in his hand all creatures (ix, 89, 6) whom he guards (x, 25, 6). His laws are like those of king Varuna (i, 91, 3; ix, 88, 8) and he is prayed to be gracious to those who violate them (viii, 48, 9; x, 25, 3). He is thousand-eyed (ix, 60, 1, 7) and hurls the sinners into abyss (ix, 73, 8). He is formidable, heroic, bountiful and always victorious (ix, 66, 16). He conquers cows, chariots, horses, gold, heaven and water for his votaries. He is a wise ṛṣi (viii, 68, 1), strong, skilful, omniscient, prolific and glorious (i, 91, 2). He is the priest of gods, leader of poets, a ṛṣi among sages, a bull among animals, a falcon among kites, and an axe in the woods[1] (ix, 96, 6). He protects men from enemies (i, 91, 21; x, 25, 7). His votaries neither suffer (i, 91, 8) nor die against his wish (i, 91, 6). He is prayed to prolong lives (viii 48, 7), and not to abandon the worshipper to death (x, 59, 4). His friendship is eagerly desired (ix, 66, 18). He rejoices in the society of waters (x, 30, 5, 6; 36, 8).

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[1] Secret Doctrine, Vol. II.

His wives: King Soma married the thirty three daughters of Prajāpati; but he was partial to Rohini only. All the sisters went to their father. Soma promised to treat them equally. They came back; but he broke his promise and was seized with consumption (Taitt. Sam., ii, 3, 5) as a punishment. In the Taitt. Br., ii, 3, 10, 1 ff., Śraddhā is said to be his favourite wife. For this, Sitā Savitrī complained against him to her father. Prajāpati prepared for her a sweet smelling paste. Sitā was painted with it on her forehead. Soma invited her and gave her the three Vedas which he had in his hand when she asked them as a gift.

In the Purāṇas, he is said to be the son of Atri and Anusūyā; and he is also said to have been produced in the churning of the ocean. But in the Ṛgveda, Parjanya, the rain-god, is described as his father and the waters as his sisters (Rv ix, 82, 3; 98, 9; x, 34, 1). He married the twenty seven daughters of Dakṣa, who are really the personifications of the twenty seven lunar asterisms (Yajurveda). Rohini was his favourite, and so Dakṣa cursed him to be childless and consumptive. His wives out of pity, interceded with their father for him; and he modified the curse that the decay should be periodical and not permanent. This story explains the wane and increase of the moon. In the Upaniṣads and Brāhmaṇas, he is said to be drunk up by the gods and so the moon wanes.

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[1] Muir: Sanskrit Texts, Vol. V, pp. 258-270.

He carried off Tārā, the wife of Bṛhaspati; and so a quarrel arose. Brahmā interposed and compelled Soma to restore Tārā to her husband. Tārā gave birth to a child, whom she truthfully declared to be the son of Soma. The son was called Budha and he was the progenitor of the lunar race.

His vāhana: He has winged mares of his own, a team like Vāyu (ix, 86, 37; 88, 3) in speed. He also harnesses the horses of the Sun (ix, 63, 9).

Arms: He is armed with thousand-pointed shafts, (ix, 83, 5; 86, 40) which he grasps in his hand (ix, 76, 2). His arms are sharp and terrible (ix, 61, 30) and his bow swift-darting (ix, 90, 3), with which he destroys his foes and overthrows cities (ix, 61, 2; 88, 4). He often takes the place of other Vedic gods, Indra, Varuna and other deities. He is said to have killed Vṛtra.

Many European scholars regard that the references to the Moon as Soma are only to be found in the more modern hymns, and in earlier hymns Soma always refers to the plant or its juice. Thus the 85th hymn of the tenth maṇdala is a later hymn according to Roth (Nirukta, p. 147) and Weber. So are i, 19, 18; v, 18, 19. The examples cited by Yāska in his Nirukta regarding the use of Soma in the sense of the Moon are collected from portions of the Veda, which are distinctly styled as "later." But even

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in the hymns which are accepted by scholars as "earlier," Soma refers to a god who lives in heaven:

Gods live in heaven (viii, 13, 2; 69, 3). There Soma lives. His adorable, (ix, 86, 15) feet are in heaven (ix, 79, 14). He was brought to earth from heaven by a falcon (iv, 26, 6). He makes a sign when he comes down (ix, 64, 8). Placed midway between heaven and earth, he goes all round (ix, 70, 5). May his thousand rays come to earth, (ix, 71, 5). He travels in the sky like a bull (ix, 71, 3). Sūrya protects the abode of Soma, who protects the children of Devas (ix, 83, 4). He causes the stars to shine (ix, 85, 9). He is the upholder of, and is shed from, heaven (ix, 76, 1).

The honey-tongued Veṇa milked Soma in heaven (ix, 85, 10). The Veṇas (the Venus or Sukra—see Tilak's Orion, pp. 261-5) pray Soma, the moving child in the sky, (ix, 85, 11). The boy, with Sukra shine through the splendour of the Sun, (i, 86, 4; 94, 1, 2; 96, 24; ix, 46, 4; 85, 12). (Here Soma or the Moon is called a baby as the Moon of second to the fourth day of Suklapakṣa, *i. e.* the fortnight of the moon's increase, can possibly join with Sukra). Soma goes to Devas (ix, 86, 7). Clad in shining clothes Soma crosses the sky (ix, 85, 14). Soma is the fleetest of all moving bodies;—travels like air and Sun (ix, 88, 3), moves alone (ix, 97, 6) towards the East in a car fastened by the Sun's rays, (ix, 11, 1, 3), faster than the speed of the waters, the planets in the sky and the speech (ix, 84, 12), like a fiery horse (ix, 96, 15) on a wide (ix, 12, 8) path curved like a bow (ix, 21, 1; 24, 2, 3) and fixed by law (ix, 86, 33), whence Soma sends his rays (ix, 90, 4).

Soma the Tigmaśṛṅga has two yellow horns like those of the Moon (ix, 5, 2; 15, 4; 70, 7; 87, 7; 97, 7), and increases gradually (ix, 97, 9) in the sky (ix, 97, 40, 44) and thus pleases the gods (ix, 97, 39) by swelling out like

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water (ix, 17, 4; 27, 6; 107, 12). Similarly the Sun, Agni and Indra are said to have possessed sharp horns (i, 163, 9; ii, 140, 6; vi, 16. 39; vii, 19, 1; viii, 60, 13). Soma is surrounded (ix, 86, 32) and polished (ix, 76, 4) by the sun's rays. Soma enters into the Sun's rays (=Kalaṣa) (ix, 86, 9; 99, 33), and comes out of it again (ix, 25, 6; 71, 2; 79, 9). Kalaṣa is mentioned in ix, 43, 3; 62, 19; 63, 13, 23). By Kalaṣa, Yāksa understands कला शेरते अस्मिन्: the receptacle of Soma. Kalaṣa is also the abode of Mitra Deva (ix, 12, 35; 86, 11; 92, 6; 96, 23). On the Amāvaśyā (the day of the new moon) and Pratipada (the first day of the moon's increase) the moon is not visible and so is represented as entering into Kalaṣa (ix, 71, 9; 97, 33). On the second day the new moon is visible and is thus described as a baby. A place in the sky, near the Sun where the Moon is not visible is the Kalasa of the Moon. See Hillebrandt's Vedische Mythologie, I, pp. 463-6 and 467. The fact that the moon shines by the reflected rays of the sun was well known to the Vedic Indians, (ix, 25, 6; 71, 2, 9; 76, 4; 86, 32), *Ibid*, pp. 467-8. See Thibaut: Astronomie Astrologies und Mathematics, p. 6.

Soma by his rays causes day (Tithi) (ix, 92, 5), and also measures day (ix, 86, 45). Soma "lights up dark nights and is the day's banner" (vi, 39, 3). The ancient Ṛṣis used to celebrate pious acts on auspicious days marked by Soma (ix, 6, 11), and thus Soma is said to have helped sacrifices (ix, 97, 12). Through Soma our forefathers knew their ways (ix, 97, 39). Soma makes the nights, days and years resplendent and the Devas fixed him as the cause of days in ancient times (vi, 69, 3). Soma, by prayer, outstrips the enemies; like a reined horse he does good (ix, 96, 15). Soma points out the ways (ix, 70, 9). He kills the impious (ix, 73, 8); he is the king of day (ix, 73, 30). Soma

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knows the way (iii, 1, 62, 13 ; ix, 65, 13 ; 101, 10 ; 104, 5, 9 ; 106, 6 ; 107, 7). The world is managed by Soma, (ix, 96, 30). He is the king of the world and shows the ways to sacrifices (ix, 96, 10 ; 4, 66).

In the following hymns Soma is apparently used in the double sense of the Moon and juice of soma plant

ix. 15, 4 : He, shaking his horns, does heroic deeds.
5 : He hastens with bright golden beams.
6 : Passing through the seive, he comes down into the vessels.
7 : He is prepared in the pails.
8 : Ten fingers and prayers prepare the intoxicating one.
x. 85, 2 : Soma in the centre of the stars.
3 : He who drinks juice of plant regards it as Soma and so no one drinks the real Soma-juice.
4 : Soma hears the sound of crushing stones, but no earthly beings taste thee.
5 : When gods drink thee, thou increasest again. Vāyu is the guardian of Soma.
97, 19, 22 : Soma is the king of medicinal plants.

We find that in many hymns as in ix, 37 and ix, 70, the poet refers to the moon and the plant in the same hymns. In the Atharva Veda, Soma often refers to the moon, and in Yajurveda the lunar mansions are said to be his wives. In the post-vedic works Soma regularly means the moon. The two Brāhmaṇas of the Ṛgveda deal largely of Soma sacrifices in which the fermented juice of the Soma plant is used in worshipping the celestial Soma or the moon.

Av., xi, 6, 7. May Soma whom they call moon, free me.

Sp. Br., i, 6, 4, 5
xi, 1, 3, 2
1, 3, 4, 5
1, 4, 4
The king Soma, who is the Moon, is the food of the gods.

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i, 6, 3, 24 : Moon has the nature of Soma.
v. 3, 3, 12 }
ix. 4, 3, 16 } Soma is the King of Brāhmaṇas.
xii, 1, 1, 2 : Soma is the Moon.
Viṣṇu Purāṇa : Bk. 1, Ch. 22 : Brahmā made Soma to be king of stars and plants.

There are no doubt many hymns that point to the Soma plant but the descriptive terms used may, by analogy, be applied to Moon. "The purifying seive" of 'sheep's tail" may meterphorically refer to the "seive-like wool cloud" (Hopkins). Hillebrandt declares that Soma always means the moon; but his arguments still leave it a matter for discussion whether in the Ṛgveda the Soma is everywhere addressed to the Moon or the plant. The lunar interpretation of Soma is incompatible with the statements in ix, 97, 41 and *ib*, 37, 4 that Soma "produced the light in the Sun" and "makes the Sun rise." Hopkins rather inclines to identify Soma with Indra and cites many hymns to substantiate his theory. But his arguments are not conclusive;—they depend on a few hymns and cannot explain the others. He thinks that the Soma cult is even older than the Vedic Indra, as several Indo-Iranian epithets of Soma and Haoma such as Vṛtraghan, Verethraja, etc. refer to a period when the Soma cult was observed, by the Indians and the Persians alike.

Soma is identified with lightning in Rv. ix, 47, 3.

But in x, 85, 3 and 4, the lunar theory is expressed in the Veda in unmistakable language:

3. "Men think that they drink Soma when the Soma plant is pressed. But the true Soma as known to priests, no one gets as a drink."

4. O Soma! The priests conceal you. You hear the sound of stones but no one in this earth gets you as a drink.

Thus in the hymns to Soma we have the Soma-cult as worship of the moon, but this is concealed by the priests by the more popular worship of the Soma drink from the plant. In modern times we know of similar practices resorted to by the priests : The Panca Makāra, the Five "M"s Cult has a deep, hidden and esoteric meaning to the priests and at the same time, it forms the basis by the popular cult of revolting Tantric worship, analogous to Dionysiac rites.

Soma is sometimes invoked with other gods : Indra, Agni, Rudra, Vāyu and Puṣān

Soma and Agni (i, 93, 1 ff) : the two gods placed the luminaries in the sky (i, 93, 5)

Soma and Puṣān (ii, 40, 1 ff) : Generators of wealth, and of heaven and earth, guardian of the world and centre of immortality.

One lives in sky (4) ; he produced all the worlds (5) The other lives on the earth and atmosphere (4) and beholds all things (5)

Soma and Indra : iv, 28 : vi, 72 : Prayer to dispel darkness ; to destroy revilers ; to bring sun and light ; to support sky and to spread out the earth.

vii, 104, 1, 8 : Prayer to punish Rākhasas, Yatudhānas, &c.

Soma and Rudra : vi. 74 : they are armed with sharp weapons : and prayed for blessings to man and beasts, for healing remedies, and for deliverance from sin.

Atharva Veda : vii, 42, : O Soma and Rudra, ' drive away the desease that has entired our house-hold.

2 : Do ye put all remedies in our bodies.

Soma and Vāyu : v, 52, 11 : We pray Vāyu and Soma, the protector of the world.

Soma is supposed to preside over medicinal plants, and is also called Vanaspati, or "lord of forest." In the Ṛgveda 1.22 we find the sage Medhātithi declaring his knowledge of the power of water as a remedial agent, as derived from Soma.

"Soma has declared to me 'all medicaments as well as Agni, the benefactor of the universe, are in the waters'—the waters contain all healing herbs.

"Water bring to perfection all disease,—dispelling medicaments for (the good of) my body, that I may long behold the sun.

"Waters take away whatever sin has been (found) in me, whether I have (knowingly) done wrong or have pronounced imprecations (against holy men), or (have spoken) untruth.

"I have this day entered into the waters: we have mingled with their essence."

Wilson's Trans. Vol. I, p. 57.

In another hymn i. 91 :

"Thou, Soma, fond of praise, the lord of plants, art life to us." *Ibid*. p. 234.

And again i. 120 :

"Be unto us, Soma, bestower of wealth, the remover of disease, exulting Soma! increase with all twining plants."

Ibid. p. 324.

In the Ṛgveda the following hymns treat of the Soma :

In most of the hymns to Indra, Soma is described as the friend of Indra. All the gods depend on Soma for immortality, and Soma juice is praised in the hymns addressed to other gods. So Soma is mentioned in many hymns of the different maṇḍalas.

Rv. I, 91, 1—23 : Originator and protector of plants.
93, 1—12 : Prayer to Agni and Soma.
II, 30, 6 : Prayer to Indra and Soma.
40, : Prayer to Soma and Puṣā.
III, 62, 13 : Soma knows the way.
14 : May Soma bring boiled rice free from disease germ for the biped and quadruped animals.
15 : May Soma sit in the sacrificial altars after prolonging our life and conquering our enemies.
IV, 28. : Prayer to Indra and Soma.
V, 51, 12 : Prayer to Vāyu and Soma who is the protector of the world.
VI, 47, 1-5 : Soma stimulates speech, causes pleasure, displays solar splendour and upholds the sky.
51, 14 : Prayer to kill Paṇi.
52, 3 : Prayer to hurl weapon against the enemies.
72. : Prayer to Indra and Soma.
74. : Prayer to Rudra and Soma to cure contagious diseases.
75, 18 : May Soma protect you with Amṛta.
VII, 35, 7 : May Soma be peaceful to us.
41, 1 : Pray Soma and Rudra in the morning.
104, 1-7 : Prayer to Indra and Soma.
25 : Sweet adorable Soma.
VIII, 48, 3 : O Amṛta Soma! we will drink you and become immortal.
4 : Prayer to prolong our life.

5 : Prayer for protection from loss of character and diseases.

7 : Prayer to prolong life.

9 : Soma is the protector of our body.

10 : Prayer to Soma to prevent indigestion. May Soma remain in our stomach forever.

11 : May the incurable diseases disappear. These diseases becoming severe make us tremble. Soma when drunk prolongs life.

12 : Soma when drunk enters into our heart.

72-17 : Soma is the medicine for the sick.

79-1 : Soma is the conqueror of the world, is a plant and a Ṛṣi.

2 : He clothes what is naked and cures the sick; the blind sees and the lame walks.

IX : The whole of the ninth maṇḍala teems with descriptions of the preparations of the plant Soma. The apparatus used in the manufacture of Soma juice: filters, vessels, furnace etc., are mentioned; and this maṇḍala contains perhaps the earliest account of a pharmaceutical preparation—the Soma juice.

X, 17, 11-14 : Prayer to Soma juice.

25, 11 : Rescues the blind and the lame from their defects.

36, 4 : May the Stones drive away the demons.

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8 : Soma juice mixes with water.

44, 4 : Soma juice nourishes the body.

76, : Prayer to the stones which crush the Soma plant.

X. 85, 1 : Soma is in the sky.

2 : Soma has made this earth spacious; Soma is placed near the stars.

3 : Men think that they drink Soma juice by pressing the Soma plant. But the true Soma, as known to the poets, no one can drink.

4 : The poets have concealed Soma. You hear the sounds of stone but no one on the earth can drink Soma.

5 : When Soma is drunk, it increases instead of loss. Vāyu protects Soma, as year is sustained by months.

19 : Candra distributes long life.

94, 1, 14 : Description of the preparation of Soma juice.

94.
175. } Prayer to the stones for pressing Soma.

Formulæ attributed to Chandra :—

1. Candraprabhāgutikā : It was obtained by Candra through Sambhu's kindness—R.C. ix, p. 86. This formula has been quoted in pages 58-9.

BUDHA.

The “Wise, or intelligent.” He is the planet Mercury, son of Soma, the moon, by Rohini, or by Tara, the wife of Vṛhaspati, the Lord of prayer. He married Ilā, the daughter of the Manu Vaivasvata, and by her had a son, Pururavās, a god among men, who loved Urvaśī, that paragon of the Apsārasas (Harivaṁśa 88-11). Budha was the author of a hymn in the Ṛgveda. For an account of his birth see Soma.

Books :

1. Sarvasāra : Budha, the son of Candra (Moon), is said in the Bramhavaivarta Purāṇa, to have written a work on medicine called the “Epitome of all sciences.” [1]

2. He is said to have been well-versed in science and is said to be the first author on veterinary science and to have written a scientific treatise on elephants.

End of Vol. I.

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[1] See foot-note 1, p. 7.

Opinions

(1)

("The Surgical Instruments of the Hindus, with a comparative study of the surgical instruments of the Greek, Roman, Arab and the modern European Surgeons." By Dr. Girindra Nath Mukhopadhyaya, B.A., M.D., Fellow of the Calcutta University.)

Last year the University of Calcutta published the book, which is in the form of two stout volumes of 700 pages, as the Griffith Prize Essay for 1909. Originally Dr. Mukerjee read three papers on the Surgical Instruments of the Hindus before the Asiatic Society of Bengal in June, July and August, 1908. The learned President in his annual address remarked as follows: "In the course of the last session Dr. Girindra Nath Mukerjee submitted to the Society a paper of considerable extent, in which he elaborately examined the subject of the Surgical instruments of the ancient Hindus. The question he has raised, as to the priority of Hindu medicine over that of the Greeks, the Romans and the Arabs, are likely to arouse controversy, but in whatever way the question of priority may be decided, it seems to me truly remarkable that the descriptions given in our most ancient books on medicine, of the surgical instruments then in use should bear a close resemblance to the descriptions given not only in Greek, Roman and Arab medical writings but in many cases with the descriptions given in modern works on Surgery. I trust that this subject, so peculiarly Indian will not be left alone and will receive the attention from investigators which it undoubtedly deserves." (J. A. S. B., Vol. V, 1909). In 1909, the paper was amplified and submitted as a thesis for the Griffith Prize for 1909, and it was successful in gaining highest commendation.

The book represents many years of laborious investigations—a work of real research and erudition. It is undoubtedly the most important work upon this subject which has yet been written in the English language. It is full of interesting informations and is a valuable contribution to the history of Medical Science. Dr. Mukerjee is a pioneer in this field of research. It is of course impossible in a short notice to give an adequate account of a scientific work devoted to a special study, but his discovery that the Surgical instruments in use in Europe, were only modifications of those used by our Surgeons in ancient days is no doubt startling. The book is exhaustive, original and informing and it reflects the utmost credit on the industry, learning and research of its author. From many neglected, forgotten and unexpected corners, he has accumulated a mass of materials and compiled a systematic account of the instruments used by the Hindu Surgeons, about 3000 years ago. A field of study which is unknown to many is here made accessible to all by the labour of an Indian. It has the advantage of being written by one, who is not only a noted Surgeon of Calcutta but is also a profound Sanskrit scholar. This year he has contributed

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another important work "Notices, Biographical and Bibliographical, of the Indian Physicians and their works on Medicine" for which the Griffith Prize for 1911 is awarded to him. Sir Asutosh Mookerjee in his last Convocation address, mentions it as a notable contibution "on the History and Critical Estimate of the work of Ancient Indian writers on Medicine."

No brief analysis of Dr. Mukerjee's work is possible. The work is divided into nine chapters, in which he describes each instrument by its Sanskrit name with a comparative study of similar instruments from the Surgical catalogues of other nations. Besides, there is a learned preface, and a carefully-prepared index of Sanskrit and English words. The book is of extraordinary interest to those who would make an impartial study of the Surgery of the Hindus. The foot-notes contain the Sanskrit originals. the source of Dr. Mookerjee's descriptions of the instruments. The subject of ancient Indian medical literature has been little noticed by the European scholars. The contributions from Wilson, Wise, Jolly, Cordier, Hoernle are no doubt important but their works cannot compare with the present in the amount of original research and complete mastery of the subject. Dr. Mukerjee quotes with becoming gratitude the help he had derived from his predecessors in this field of research. One is impressed as he advances through this valuable work that the author has spared no pains to make the work useful and instructive.

Dr. Mukarjee has enriched his highly original book with numerous illustrations in the second volume. The artistic merit of the plates render the work well worthy of the high reputation of the author.

The book is admirably written and nicely printed. The University of Calcutta deserves high praise for the publication of such a standard work. From every standpoint it is a publication of which the University may be proud. As a book of refererence the book will be found invaluable and Dr. Mukerjee is to be congratulated on the result of his labour.

Bengalee.

(2)

(*Extract from the Englishman of 18th September, 1914.*)

SURGICAL INSTRUMENTS OF THE HINDUS, BY GIRINDRA NATH MUKHOPADHYAYA, B.A. M.D.

This work describes the numerous instruments used by the ancient Hindus for surgical purposes. The author has also decided the priority of Hindu medicine and surgical instruments over those of the Greeks, the Romans and the Arabs. The "*Garbha-sanku*" (foetus or traction hook) was used for extracting a dead foetus after perforating its head by the "Mandalagra." The Hindu surgeons recommended the extraction of the living foetus by manual traction, the hand being recommended by more modern writers on Hindu surgery for extracting the child alive. Susruta directed the use of the "Sarpa fana" or snake-hook for the extraction of stone. The illustrations of the various instruments mentioned add to the interest of the work. The author is to be congratulated on the success of his enterprise.

(3)

DOVER, ENGLAND,
October 8

DEAR MOOKERJEE,

Your books reached me safely last month and I have been much interested in reading them, though just now it is difficult to think of anything but the war, which is going on just across the water in front of me. All the more it is pleasant to be taken back to old times and to thoughts of the Medical College and its students.

I have to thank you very much therefore for your books and also for your friendly letter of 12th May.

Your sincerely,
G. BOMFORD.

(4)

To Dr. Girindranāth Mukhopādhyāyā, B.A., Fellow of the Calcutta University, McLeod Gold Medalist in Surgery, Formerly Lecturer on Surgery, Calcutta Medical School and College of Physicians and Surgeons (Bengal), Member of the Asiatic Society of Bengal, Life Member and Professor of Botany, Indian Association for the Cultivation of Science, Examiner, Calcutta University.

DEAR SIR,

I regret to say that I am disqualified for appreciating the two volumes which you have kindly sent me, as they ought to be appreciated, because I am completely ignorant of Surgery. So much I can, at any rate, say, that the results of your investigations have been a revelation to me. I had, until I read them, no idea of the high level which the ancient Indians had attained in the surgical treatment of diseases. I cannot even now pretend to be in a position to decide whether the Greeks borrowed from the Indians, or the Indians from the Greeks. With all my predispositions in favour of Greek science, I must confess that, as far as I can see at present, the Indians must have attained as high a level as the Greeks. And here I cannot refrain from complementing you on the wideness of your reading. You seem to be as familiar with Hippocrates and Celsus, as with Sus'ruta and Charaka. I used to possess a copy of Celsus, and of some work of Hippocrates, but I now remember but a few words of each author.

I suppose that surgical science has made great advances in Europe during my own lifetime. The use of anaesthetics which does not seem to have been thoroughly known to the ancient Indians, and the sterilising of surgical instruments must have conferred great benefits on the human race. When I was a boy, I used to hear a great deal about cupping and other processes which you describe, and even knew something about the habits of leeches. It is possible that these therapeutic agencies are much used now, without my knowing anything about them, and it is probable that my *naive* confessions will raise a smile on your countenance.

Whatever may have been the case with surgery, I cannot help thinking that medical science must have been in a very imperfect condition when our Charles II died. Macaulay mentions some of the loathsome remedies which were administered to him. And yet the Roman Catholic physician who attended him was a man "whose skill was then widely renowned." It is intresting to reflect that at this time Sydenham was alive. I do not know if he was called in.

We have all read how Lady Mary Wortley Montagu introduced into England the Turkish custom of inoculation for small-pox. Do you think that the Turks borrowed it from India ? I should not be surprised to hear that they did.

But I am wandering from my subject and perpaps getting a little out of my depth.

I used to wonder a little at the interest which Dr. Hoernle and other able men took in ancient Indian medicine But Dr. Hoerule's Osteology opened my eyes a little, and your disquisitions have enabled me to form a wider accquaintance with the whole subject. I am glad to find that in your concluding chapter you show that Europe is permanently indebted to India for the use of certain simples and the performance of certain surgical operations. In this way your native land has contributed her quota to the physical well-being of the human race, and you are justly proud of the fact.

In any case, a perusal of your two volumes must convince any unprejudiced reader that the developement of the healing art in India must always occupy an important place in the history of civilisation. We hear a great deal of "culture" now-a-days, and it does not always wear a beneficent aspect. But peace has her victories as well as war, and it is evident that the humane achievements of the Indian disciples of Aesculapius can no longer be ignored. It is a pleasant reflection that henceforth the medicine and surgery of the East will be allied in harmonious conjunction with the same sciences as cultivated in the West, and the happiest results may be expected from their sisterly rivalry.

I am sorry to say that I have detected a good many misprints in your first volume both in the text and in the notes.

On the other hand the plates in your second volume seem to me admirable.

I must send this to the care of the Registrar, as I fear that I have misplaced your letter.

I remain,
Yours very truly,
CHARLES H. TAWNEY.

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(5)

PRESIDENCY COLLEGE,
Calcutta, the 4th August, 1914.

DEAR DR. MUKHOPADHYAYA,

I have been going through your "Surgical Instruments of the Hindus" with interest and admiration. In the preface of my "History of Hindu Chemistry" I wrote with regret that "a comprehensive history of Hindu Medicine has yet to be written." You have at any rate contributed a valuable chapter towards it. No one could have done greater justice to the subject. The author of such a work should combine in him a thorough knowledge of modern surgery, the critical method of the West, and a vast acquaintance with the Sanskrit medical literature. It is scarcely necessary to add that in you one can readily recognise a rare and harmonious combination of all these requisite qualities. With congratulations on the completion of your labour of love.

I remain,
Yours sincerly,
P. C. RAY.

P. S.

I am afraid you scarcely do justice to the Buddhists when you ascribe the decadence of Hindu surgery, partially at any rate, to the teachings of the "Blessed One." You should remember that the redaction of Susṛuta, such as we now meet with is due to Nágárjuna as Dalvan the Commentator calls him "প্রতিসংস্কর্ত্তা" etc. The causes of decadence have been hinted at in the chapter entitled "Decline of Scientific Spirit" in my "Hindu Chemistry."

(6)

From the Regius Professor of Medicine, Oxford.

29, August, 1914.

DEAR SIR,

Many thanks for your volumes, which it is most kind of you to have sent. I shall be particularly interested in the one relating to the history of Indian surgery. I shall also be greatly interested in your book on Abscess of the Liver, a disease of which we had a good many instances at the Johns Hopkins Hospital, and Councilman and Lafleur's monograph was written from my department.

Prof. Hoernle here will be most interested in your historical studies. I will let him see a copy of your work at once.

Sincerely yours,
WILLIAM OSLER.

(7)

NARIKELDANGA, CALCUTTA,
19th November, 1915.

DEAR DR. MUKHOPADHYAYA,

Pray pardon me for the delay that has occured in my acknowledging with thanks the receipt of your kind present of the two volumes of your elaborate work on "The Surgical Instruments of the Hindus." It evinces varied learning, diligent research, and admirable skill in methodical arrangement, and it will rank as a valuable contribution to Indian medical literature.

GSL

Your other work, "Tropical Abscess of the Liver," a copy of which also you have so kindly presented to me, is a highly technical treatise, of which I am not competent to say anything more than this, that it is a model of patient and thorough investigation in search of truth.

With best regards,
I remain,
Yours sincerely,
GOOROO DASS BANERJEE.

(8)

RATHFARNHAM, CAMBERLEY, SURREY.
2-11-14.

DEAR SIR,

Last June you wrote to me that you were kindly sending me a copy of your work on "The Surgical Instruments of the Hindus," and in the following August I wrote to you that the book had not yet arrived. Some time ago, long after I wrote to you, I received the promised volumes through the Calcutta University. I was ill at the time, and after my recovery had to go away from home, so that there has been considerable delay in acknowledging the receipt of the book and in thanking you for it. I have read it with great interest, and with full appreciation for the learning exhibited by you in its preparation. Indian medicine and surgery are subjects that I have never studied, and hence any remarks in detail concerning your work would be of no value, and I must content myself with a layman's general admiration for the historical labours of an expert who is evidently a master of the matter with which he deals.

Yours faithfully,
GEORGE A. GRIERSON.